

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
McALLEN DIVISION

UNITED STATES OF AMERICA § CASE NO. 7:19-cv-00403
 § McALLEN, TEXAS
VERSUS § THURSDAY
 § JANUARY 9, 2020
FISHER INDUSTRIES, et al § 10:06 A.M. TO 1:51 P.M.

NORTH AMERICAN BUTTERFLY § CASE NO. 7:19-cv-00411
ASSOCIATION, § McALLEN, TEXAS
 § THURSDAY
VERSUS § JANUARY 9, 2020
 §
NEUHAUS & SONS, et al § 10:03 A.M. TO 1:51 P.M.

PRELIMINARY INJUNCTION HEARING (CONT'D)
(PARTIAL TRANSCRIPT - EXCLUDES COURT'S RULING,
PREVIOUSLY TRANSCRIBED)

BEFORE THE HONORABLE RANDY CRANE
UNITED STATES DISTRICT JUDGE

APPEARANCES: SEE NEXT PAGE

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1 McALLEN, TEXAS; THURSDAY, JANUARY 9, 2020; 10:06 A.M.

2 THE COURT: Let's get started. 19-CV-403.
3 Announcements first, please.

4 MR. WARNER: Good morning, Your Honor. Paxton
5 Warner and Daniel Hu of the United States of America.

6 MR. COURTOIS: Mark Courtois here for the Fisher
7 Industries, Fisher Sand and Gravel.

8 MR. KIRBY: And Lance Kirby here for Neuhaus.

9 THE COURT: All right.

10 MR. VICINAIZ: Victor Vicinaiz on behalf of We Build
11 the Wall, Your Honor.

12 THE COURT: You're not in that lawsuit.

13 MR. VICINAIZ: Oh, not in that one, okay.

14 THE COURT: Yes.

15 MR. VICINAIZ: Good.

16 THE COURT: And let me -- I want to hear these
17 together like we did last time, so let me call for
18 announcements in the other case. 19-cv-411, North American
19 Butterfly Association versus Neuhaus and Fisher Industries.
20 Announcements in that case. For the Plaintiffs first?

21 MR. PENA: Javier Pena for the Plaintiffs, Your
22 Honor.

23 MR. COURTOIS: Mark Courtois for Fisher Industries
24 and Fisher Sand and Gravel.

25 MR. KIRBY: Lance Kirby for Neuhaus.

1 MR. VICINAIZ: Victor Vicinaiz for We Build the
2 Wall.

3 THE COURT: All right. So, welcome, and you may be
4 seated.

5 Prior to the Court taking the bench there were a
6 number of inquires about having people attend by phone or
7 Skype, and we've tried to accommodate all of that. And to
8 make sure we didn't have glitches out here, actually connected
9 the Skype witnesses, patch them in here. And they asked, just
10 in our trying to get this up and running, asked if they could
11 witness or listen to everything that goes on before them. I
12 said I didn't see any problem with that, I would check with
13 the lawyers to make sure there aren't any issues with that.

14 Did anybody have any objection to their listening
15 in?

16 MR. WARNER: No objection, Your Honor.

17 MR. COURTOIS: No objection, Your Honor.

18 MR. KIRBY: No objection, Your Honor.

19 MR. VICINAIZ: No objection, Your Honor.

20 MR. PENA: No objection, Your Honor.

21 THE COURT: All right. So we'll let these witnesses
22 listen in. And then I was also told there was a scheduling
23 conflict with one particular witness, and I asked if that
24 person could be taken out of time. I don't have any problem
25 with that.

1 MR. PENA: Yes. Mark Tompkins, the Plaintiffs on
2 the 411 case, starts a conference I believe in about an hour
3 or so our time. So I've talked to Mr. Courtois about taking
4 him first, putting his testimony on. And he did inform me,
5 and I want to speak to you about that, but that he did not
6 recall.

7 MR. COURTOIS: No problem.

8 THE COURT: Now in the meantime there was some --
9 let's pick back up where we left off, in the Government case,
10 not the Butterfly case, there was data that was being
11 exchanged, modeling that was being run, responses that were
12 going to be issued and replies. Where are we on all that
13 stuff?

14 MR. WARNER: Your Honor, if I could, I've got an
15 exhibit book of the timeline that includes all the emails that
16 have been exchanged. I've got two copies for the Court.

17 It basically lays out what has happened since then,
18 Your Honor. And I need to give counsel time to look, I guess,
19 but I would offer these as our exhibits of where we are right
20 now with -- so that the Court has an accurate up to date
21 timeline of what has happened since we were last here in
22 court. The long and short of it is that --

23 THE COURT: Yeah. You can't expect me to read -- I
24 mean, this would take me 20 minutes, 30 minutes, I mean.

25 MR. WARNER: Let me just give you the long and short

1 of it, Judge. We've got technical comments out on Tuesday.
2 They came back with the new model. So basically what we were
3 going to require was they needed to change some numbers and
4 some things and equations, different stuff like that in the
5 models; rerun them, send them to us.

6 The model without the wall in it ran to completion,
7 as I understand it. He's now taking anywhere from 10 to maybe
8 as much as 15, 10 to 12, 15 hours to run these now as opposed
9 to an hour. The one with the model with the wall in it
10 crashed last night at about 10:00 a.m. -- 10:00 p.m. rather,
11 so about 10:06.

12 Dr. Bora sent an email letting them know that the
13 model with the wall had crashed. They came back and
14 apparently they had left some equations out or something, got
15 that all filled back in by about midnight. IBWC got a link
16 with what should be the correct model. They're running that
17 now to see if it will run to completion. That's without
18 crashing.

19 Then separately, as part of that list that was sent
20 out, Your Honor, there were hydraulic computations that were
21 -- hydraulic calculations that were required. And IBWC tells
22 me of everything, those calculations are critical as they look
23 at the model.

24 And so, Mr. Fisher's group has responded this
25 morning, point by point, to our technical comments saying that

1 they've either provided it in the model or they're going to
2 provide it in the report. So I mean I think we're working
3 together very nicely, Your Honor, back and forth.

4 The IBWC tells me, and I've got Dr. Bora ready to
5 testify about this. They can have their review completed.
6 They'll work all weekend, provided they get the calculations.
7 They can complete the review by Tuesday. So that's where
8 we're at.

9 So there was some wall modeling that you-all talked
10 about at the last hearing. There was even some examples that
11 were shown. So, is this a new wall modeling or?

12 MR. WARNER: So there was facing issues that they
13 wanted redone.

14 THE COURT: Sure.

15 MR. WARNER: There was computation issues that they
16 wanted redone to make it more accurate to what will actually
17 happen on the ground. My understanding is that that is all in
18 the new model that Mr. Fisher's group has submitted to us.
19 It's just that it crashed last night. So we're trying to run
20 it now and it will be a much more accurate depiction of what
21 will actually occur in the flood event with Mr. Fisher's
22 proposed wall, or fence.

23 THE COURT: Right. Or that I don't that it's Mr.
24 Fisher's proposed fence, but I understand what you mean.

25 Mr. Warner, is that accurate? Do you disagree with

1 anything that was stated there?

2 MR. WARNER: Yes. We did -- there was modeling that
3 the Court saw last week. It's the same data. Essentially you
4 just changed some variables in the program, which is what
5 they've asked to be done, like the friction coefficient, which
6 is kind of help, slay for help, rough surfaces and how
7 detailed we get in per foot, and that's what's caused the
8 program to run a lot longer. But it's the same data, the same
9 everything.

10 So we have responded to them. We're still trying to
11 respond to them in terms of everything they've asked for.
12 It's just that they keep asking for more and more things. As
13 best we can tell there's been no determination by them that
14 there's any impact in the floodplain or Mexico or anything.

15 So we've got some scheduling issues, we've got
16 projects that are waiting to get done. We've got another Army
17 Corps project that is going to pick up very soon. So we need
18 to get this stuff done and get moving.

19 THE COURT: So Mr. Warner, the modeling that ran to
20 completion that we talked about last time, no issues with
21 that?

22 MR. WARNER: Well, it was missing a lot of things.
23 It needed to have things added into to actually make it --

24 THE COURT: I understand. But as in its state, were
25 there any issues?

1 MR. WARNER: I don't know, Your Honor, because when
2 the technical comments came out they basically said, you need
3 to do these additional things, and once you've done these
4 we'll be able to review it and see if there's deflection.

5 At this point it's still needed increased friction
6 and things like that so that they could see it. They also
7 needed the water flow slowed down because there were grid
8 points that were actually missing any information at all
9 because of the water flow speed that they had used.

10 So my understanding is, now that we've got models
11 that actually have the information we can look at, we can go
12 in and pull all that information and actually make a
13 determination. There is no determination right now, because
14 those first models are very simplistic and needed more
15 information in them.

16 THE COURT: Now why is it or why can't the compare
17 people at IBWC adjust a variable in the program? I mean, why
18 can't they say, okay, we've run the program, it's got spacing
19 of whatever, 40 feet, a wall 40 feet gap, or whatever, 60 feet
20 wall, 40 feet gap, I can't remember what it was. We're going
21 to redo it, we want 10 foot section space by, whatever, a 4
22 foot section or something.

23 I mean why can't the people running the program make
24 that change in the program or increase friction coefficient in
25 the program? It seems odd to say, well, you do it and then

1 send it back to us, when they could just make that change
2 there. I'm trying to understand how this works.

3 MR. WARNER: It's not the IBWC's project. It's the
4 Fisher project.

5 THE COURT: No, I understand. But they're familiar
6 with --

7 MR. WARNER: And can you imagine if the IBWC went
8 and made a whole bunch of changes and then the Fisher Group
9 says, well, hold on a minute, wait, I disagree with everything
10 you've just done. Why?

11 So basically the technical comments say, okay, nice
12 start, but go back and add this stuff in and let's get an
13 accurate depiction and then we'll tell you whether it passes
14 or not.

15 If the Court will recall last time we were here, I
16 argued they turned in their homework but let us grade it. So
17 in grading it the IBWC went back and said, nice, but let's add
18 these things in, explain this, account for this, show us your
19 work, show us the actual calculations as opposed to just a
20 general statement, does not deflect. Show us the deflection
21 calculations at each cross section, show us, show us all that
22 stuff and then we're more than happy to give you an opinion
23 one way or the other.

24 So as I stand here today, the IBWC doesn't know if
25 it's going to deflect water against the treaty. We're running

1 it now and then waiting for the additional calculations, and
2 then we'll be able to have an answer. And they've told me by
3 next Tuesday, if we get the calculations.

4 THE COURT: If the IBWC is saying, we want you to
5 change this coefficient from A to B, it seem like they would
6 just say, let's just run it at B because we're going to
7 require that it be run at B. That's what I didn't really
8 understand is why they wouldn't just run it at whatever
9 they're going to require it to be run at.

10 Now I know some other things might be variable. You
11 wouldn't want the people proposing the project to make that
12 decision. But if they're going to say, well, we want variable
13 A to read B, we want coefficient A to be coefficient B, it
14 seems like they would just make those changes. But I
15 understand, I guess they don't operate that way.

16 MR. WARNER: Your Honor, I would point out that when
17 they came back and addressed the comments --

18 THE COURT: Who's "they"? There's too many
19 pronouns.

20 MR. WARNER: The Fisher Group. I apologize. The
21 Fisher Group.

22 THE COURT: Okay.

23 MR. WARNER: They didn't dispute it. They said,
24 okay, we made the changes and here they are, so.

25 THE COURT: Sure. Well, I mean, it sounds like they

1 are --

2 MR. WARNER: That's why I was --

3 THE COURT: -- doing whatever they're told to do.

4 MR. WARNER: I was happy to tell the Court, they're
5 working together --

6 THE COURT: Sure.

7 MR. WARNER: -- they're making it run.
8 Unfortunately they just had a model failure last night.

9 THE COURT: Does that mean that it started running
10 again at midnight?

11 MR. WARNER: No. That means that when they got in
12 this morning for work they started running that new model, so.

13 THE COURT: All right. Did you want to add anything
14 to that, Mr. Courtois?

15 MR. COURTOIS: Well, I mean part of the problem that
16 we've got, Judge, is that the Government has been in control
17 of this LiDAR data since 2011. And IBWC could have got all of
18 these reports. They're not strangers to the HEC-RAS model. I
19 mean all this data was data that we ultimately got from the
20 Government, got from the IBWC, that the Court may recall that
21 you required them to provide. So we're just regurgitating the
22 data back to them. These engineers use these models all the
23 time. They should have gone -- they should have had this
24 modeling done a long time ago. That's the sad thing is that
25 they should have been doing this, they know what this stuff

1 is.

2 THE COURT: All right.

3 MR. COURTOIS: But we're doing it because we wanted
4 to cooperate and we been able to sort of afford it in the
5 sense that, you know, we've done some things that the Court
6 has allowed us to do. But we're at this crunch point now that
7 we've got to really move forward.

8 And I understand Mr. Paxton -- Mr. Warner's position
9 on this and the IBWC, but we still -- they keep telling -- a
10 lot of the comments were form comments; rename the file, you
11 know, do this, do that. I mean it's kind of like, you've got
12 a teacher that's saying, you didn't give it to me in the right
13 form.

14 And so we'll address that, we'll give it to them in
15 the right form. But even, still, I mean even if we're allowed
16 to proceed, we can make changes after the fact to identify and
17 correct anything that they've identified as a problem.

18 So far, you know, none of the modeling, none of the
19 reports have indicated any deflection, any material
20 deflection, any material elevation in the water. So, you
21 know, we're seeing no impact based on their standards, based
22 on a 1D report, a 2D report, and now a second 2D report.

23 So everything we've seen indicates that there's no
24 impact, according to their standards, so we'd like to be able
25 to go ahead and proceed. If we need to make some changes to

1 it, we'll be glad to identify that and work through that with
2 them. That can be done actually post construction. This is
3 not anything that's come out.

4 THE COURT: Right. And that's the way the
5 Government indicated they've done it in the past with all the
6 Border Patrol emergency projects or something to that effect.

7 MR. WARNER: But, Judge, I would argue that the
8 river projects down here in the Lower Rio Grande Valley, Dr.
9 Uni testified to this before, they've run the models. They've
10 actually had to show and sit down with the IBWC that they
11 don't deflect water down here. Dr. Uni talked last time about
12 that spot from Falcon Dam all the way to Penitas where the
13 Border Patrol had to sit down and work with the fence location
14 to make sure there wasn't going to be deflection, and we
15 didn't build. We haven't moved forward until now, this new
16 funding, so.

17 THE COURT: I thought Dr. Uni also said, any time
18 Border Patrol needed a boat ramp or some other structure, it
19 was built and they then got the approvals after the fact.

20 MR. WARNER: I would argue that there's a big
21 difference, Your Honor --

22 THE COURT: Well, I don't want to argue. But what's
23 --

24 MR. WARNER: -- between a three-and-a-half mile wall
25 and a boat ramp, so.

1 THE COURT: But you're not arguing with what Dr. Uni
2 said and you're not disputing that's what he said.

3 MR. WARNER: I'm not disputing there's been some
4 emergency grants. I'm not disputing that.

5 THE COURT: All right.

6 MR. WARNER: But, Your Honor, the Fisher Group wants
7 to come in here today and say, we want to build, we want to
8 build, we want to build because we're losing money. But they
9 knew they had to get through this process. They knew that
10 before Christmas.

11 So this is -- I want to say that maybe the October
12 meeting, did the parties understand? I don't know. But at
13 least before Christmas the Fisher Group knew from this Court
14 that they were going to have to submit and get through the
15 process with the IBWC. And yet they still have marshaled all
16 their efforts down there and now we're coming in and crying to
17 the Court about how we've got to start, we've got to start.
18 Well, finish the process.

19 All we're saying is, finish the process, let the
20 IBWC do its job and if there's no objection then there's no
21 objection. But they're -- this whole, we're going to build
22 and then we'll going to come back later. Your Honor, that's
23 not how the IBWC operates with the exceptions to emergency
24 things with the Federal Government.

25 THE COURT: And the school in Brownsville and a mall

1 and it seems like a lot of other places as well. And of
2 course we know all these other projects on private property
3 throughout the Lower Rio Grande River, somebody testified they
4 never even bothered with them, never bothered talking to land
5 owners after they've driven by and seen fences up and other
6 built structures up. So I would say the Government's very
7 inconsistent in its enforcement of this.

8 Is there any agreement to continue the restraining
9 order? I mean before we proceed, if the parties have
10 agreements I don't want to get in the way of those. The Court
11 will gladly enter an agreement by the parties. Otherwise the
12 Court's prepared to move forward today.

13 I mean it doesn't sound like there's one, but I know
14 you mentioned several times you are working together, it's
15 very cooperative and congenial dialogue between the parties
16 and trying to get this done. So I don't want to --

17 MR. COURTOIS: It's still out, Your Honor. You
18 know, there's animosity here whatsoever.

19 THE COURT: No, I can tell there's not.

20 MR. COURTOIS: Well, the problem is, it's just kind
21 of more a scheduling thing with the contractor and getting
22 this work done. They've mobilized assets since November, and
23 that's part of the problem is that all of this modeling and
24 that sort of thing has really kind of come up after the fact.

25 They were told in October that really there was

1 nothing that was needed, they just wanted a more schematic of
2 the thing and all they had to do was jurisdiction for private
3 property. That's what they were told back in October. That's
4 why they marshaled their assets. That's why they came in and
5 started doing what they were doing.

6 So, you know, we're more than happy to try and
7 cooperate and we've been cooperating and we're trying to jump
8 through these hoops as best we can, but we're kind of getting
9 to that point where, you know, we're now almost six weeks past
10 the first hearing in this thing when we tried to respond to
11 everything they wanted, including the 2D model and they said,
12 no, that's not quite good enough, you need to come back and
13 give it to us this way.

14 THE COURT: All right. I mean I don't want to get
15 in the way if you-all have some agreements, you know, reached.
16 I'll have you enter it, if it's an agreement, so.

17 MR. WARNER: We've said that we will work over the
18 weekend and if they'll get the calculations to us we'll have
19 something by Tuesday. I think that Fisher Group wants to
20 build.

21 THE COURT: All right. Well, I mean it's --

22 MR. WARNER: We have under Article 4(b)(1) of the
23 treaty, we have to prohibit the construction of work in the
24 Territory which in the judgment of the Commission may cause
25 deflection or obstruction. And we're trying to come to the

1 judgment; does it or does it not --

2 THE COURT: Well, today's your --

3 MR. WARNER: So that's what we're trying to do, Your
4 Honor. Whether the Court thinks we were inconsistent or not,
5 we know about this project --

6 THE COURT: Sure.

7 MR. WARNER: -- and we're just simply trying to do
8 what we do under the treaty.

9 THE COURT: All right. So then let's proceed. We
10 have a witness you want to take out of turn, so I'll allow you
11 to do that, Mr. Pena.

12 MR. PENA: Thank you, Your Honor. It's Mark
13 Tompkins, for the Record, Your Honor. He testified at the
14 last hearing.

15 THE COURT: All right. So the parties that are here
16 on Skype, can you all hear what's happening in court?

17 MR. TOMPKINS: This is Mark Tompkins. I can hear
18 you, Judge, very well. The rest of the conversation is a
19 little bit difficult to hear, but I can hear you well.

20 THE COURT: Okay. So now let me address those that
21 are on Skype. You were about to say, ma'am?

22 UNIDENTIFIED FEMALE: Yes, Your Honor, we can hear
23 you pretty well. It's the other parties in the courtroom are
24 a little more difficult to hear.

25 THE COURT: All right. Maybe I can get the volume

1 turned up on our courtroom system.

2 All right. And I will allow you to mute your
3 microphone now. We're going to hear from Mr. Tompkins first.

4 All right. You may begin, Mr. Pena.

5 (Witness previously sworn.)

6 DIRECT EXAMINATION OF DR. MARK TOMPKINS

7 BY MR. PENA:

8 Q All right. Mark, can you remind the Court of your name
9 and your qualifications?

10 A Yes. My name is Mark Tompkins, I'm an engineering
11 georthologist (phonetic).

12 Q Now Mr. Tompkins, you have received some of the
13 information provided by Fisher, that was also provided to the
14 IBWC. You've received some of the information that we got
15 this morning. Have you had a chance to review any of that
16 yet?

17 A I have not had a chance to try and run the new model that
18 you've all been discussing, no.

19 Q Okay. Can you tell the Court what you have done since
20 the last hearing?

21 A Yes. So hopefully everyone recalls when I gave my
22 testimony last Thursday, I basically have gotten that version
23 of the model on New Years Eve and had very limited time to
24 review it, but I did talk about some interpretations of the
25 results that I saw from that model.

1 I have since had about a week now to look at those
2 previous model, and unfortunately I haven't had access to and
3 I don't believe we've been provided with the IBWC's comments
4 on that original model. But from some of the discussion this
5 morning I expect some of the things they made comments about,
6 I also found this week. They mentioned friction and I also
7 notice that in the model they basically used sort of a default
8 setting that makes everything work exactly the same.

9 Another one that was much more substantial that I found
10 was that the way they represent the fence. It's like getting
11 into the technical weeds a little bit here. But the elements
12 of the fence, as you recall, was sort of represented like a
13 dotted line.

14 Those weren't aligned with the model grid itself.

15 Q Can you explain why that's important to the Court?

16 A I can, yes. The model, the two-dimensional model is
17 making that calculation along each of those grid cells, where
18 water flows from one grid cell into the next, and that's in
19 all four directions and that's where shave grid cell.

20 So when you're aligning -- parts of the way they
21 represented the fence are kind of in the middle of the box, so
22 to speak. The model's not really seeing it how we were all
23 looking at in those images I shared for calculation purposes.
24 It's not really capturing the full effect of having a
25 structure yet preventing movement of water from one cell into

1 another.

2 So basically, just as a quick analysis, because I
3 remember there was a lot of questions last time I gave my
4 testimony about interpreting the differences between the
5 model. And I caveat against those are relatively small
6 differences that I was seeing them. But again, the model
7 really wasn't set up appropriately for those who were
8 important, even though they were small.

9 What I ended up doing is that I've just aligning off the
10 fence structure with the edges of those grid cells, it's
11 actually captured by the model and every place. And then
12 because I believe that there really is no way to prevent this
13 fence from acting as a trash rack, which is very similar in
14 design to in capturing lots of debris.

15 So I developed a scenario in the model where you're
16 basically capturing the location of fence properly in the
17 model and you're assuming it is clogged with debris, which
18 almost certainly will happen in one of the flood flows that
19 comes through the Rio Grand, and produced a new comparison.

20 And some of the changes I was alluding to in my prior
21 testimony are definitely accentuated and much more clear. I
22 don't know if it's available that I --

23 Q Would those images that you sent me, help the Court
24 understand your testimony?

25 THE COURT: Well, how would he know that? That's

1 speculating. How would he know what's going to help the
2 Court?

3 THE WITNESS: I've produced images that compare,
4 just like I had on the screen up there last time, that compare
5 the existing condition without the alignment of the wall and
6 the wall crowded with debris represented appropriately. And
7 that shows significant differences in the flow patterns in the
8 vicinity of the wall during high flows. So I think that's a
9 very important difference in the way that the impact of this
10 structure is modeled and should be considered.

11 MR. PENA: Your Honor, could we put some of these
12 images on the Elmo?

13 THE COURT: Mm-hmm.

14 BY MR. PENA:

15 Q Mr. Tompkins, or Dr. Tompkins, I am first going to show
16 the Court the image that you submitted.

17 MR. PENA: May I operate this in, Your Honor?

18 THE COURT: Yeah.

19 MR. COURTOIS: Judge, can I have maybe a rolling
20 objection to the fact that this witness is not even here and
21 can't identify what's being put on the Elmo at all. We were
22 trying to accommodate the engineers, but I don't want evidence
23 being into the Record that really hasn't been substantiated at
24 all by any witness, let alone the fact that we haven't seen
25 any report from this person.

1 THE COURT: All right.

2 MR. PENA: We're just offering this for
3 demonstrative --

4 THE COURT: I'll allow your running objection. But
5 the Court will give it whatever weight is deemed necessary,
6 since it's a court hearing.

7 MR. PENA: Thank you, Your Honor.

8 THE COURT: But you may obviously need to clarify he
9 knows what this is that you're putting up.

10 BY MR. PENA:

11 Q Could you describe the image? I'm holding up first the
12 image that you sent without the wall. Just so the Court can
13 understand we're talking about something, can you describe it
14 to me, the first image?

15 A I can. And I have both on my screen in front of me here.
16 The first image is just the model without the fence build into
17 the model, so you should see it's mostly a dark blue. It
18 basically covers the meander bend, starting on the left-hand
19 side to the west it covers the meander bend that runs along
20 the National Butterfly Center property, and then it proceeds
21 through the meander that the fence will be constructed along.

22 And you should see sort of a lighter green color in the
23 far left part of the model where the river is, and again it
24 starts to turn lighter green in the river channel on the
25 lower-right-hand corner. That's what I assume you're looking

1 at right now.

2 MR. PENA: Yes. And just for the Record, the
3 lighter green does not come out on the Elmo, Your Honor, but
4 you can see on the image the green does show up, just color
5 calibration issue.

6 THE COURT: Right. I can see if from here.

7 MR. PENA: Okay.

8 BY MR. PENA:

9 Q Now, could you tell the Court what these white lines are
10 in the model and why the area at the top where the Butterfly
11 Center is, where the river is represented, is white versus the
12 rest of it which is just covered in these dashed lines?

13 A Yeah. You're seeing two different things here. So the
14 color coding and the light green to blue, dark blue, is really
15 the velocity at. So the darker blue means slower water, the
16 lighter green and into the red, which you're not getting in
17 this one but in the other figure I've produced you will see,
18 is higher velocity.

19 The white lines that you see going across, that's just
20 the animation that I have going last time. It shows basically
21 the general stream flow direction, so how the tide flows. The
22 Rio Grande is flowing over its entire floodplain here, and you
23 can sort of see that on either side. It's a rather uniform
24 pattern of those white, thin white lines. Those are just the
25 arrows depicting the general flow pattern across the

1 floodplain without any fence/structure in place.

2 Q Okay. I am now going to put on the screen, Dr. Tompkins,
3 the second image you sent me. Can you describe for the Court
4 that second image?

5 A Yes. It's the same extent of the model. This is the
6 representational model that I -- this was illustrated further
7 that I just built using, like what I said, aligning the
8 alignment to the fence properly with the grid cells. And then
9 assuming that the fence itself gets clogged with debris, that
10 means it's blocked.

11 Q Dr. Tompkins, if you could wait. We're waiting for the
12 Elmo to actually load up to the projector.

13 A Yes, I can wait. Let me know when to proceed.

14 THE COURT: That's the screen that it defaults to
15 and it doesn't receive a signal. So it's odd that it's
16 defaulting to that screen. If we move it a little bit.

17 I don't know what we're waiting on. Let me see.
18 All right, so definitely working. Let's move back to the
19 lectern. I don't know why it's not coming up on the screen,
20 but I can see it, and if you want to just --

21 MR. PENA: Your Honor, I have two copies. I can
22 provide this one for the Court so we have a closer look.

23 THE COURT: Sure. If you hand it to the court
24 reporter.

25 You might want to let the experts see it.

1 BY MR. PENA:

2 Q Dr. Tompkins, if you could describe to the Court what
3 we're seeing in the second image and why there's a difference.

4 A Yes. So again, this is the same extent as the model. In
5 this scenario I've aligned the alignment of the fence properly
6 along the faces of the grid cells. And then I've assumed that
7 the fence is clogged with debris, in other words it's a solid
8 barrier.

9 And what you see happening, I think there's a few obvious
10 things that jump out. In the meander bend, along the
11 Butterfly Center property, you see that what was just a rather
12 small light light green is now much darker and bigger green.
13 And more substantial and obvious than that is the meander bend
14 downstream to the south, sort of at the middle of the picture
15 and the bottom of the picture, you see it goes into the red.

16 And this scale is from zero to 15 feet per second, and
17 you remember last week we were talking about differences that
18 seemed somewhat small, but the previous version of the model
19 is showing a change from 2 to 4 feet per second. Now we're
20 talking about changing from 2 in that meander bend to
21 something like 11 or 12 feet per second, which will definitely
22 be scouring the bed and the sand and the river.

23 And again as we talked about last week, when you create a
24 hole downstream in a river there's going to have to be some
25 supply of sediment cross stream, so part of that is going to

1 come from eroding the banks upstream and the bed as well.

2 They key point is you're seeing significantly increased
3 velocity because you're now squeezing the flow to the south
4 and north ends of the extent of the fence.

5 And the other really important one is at the top of that
6 U that you're seeing. You see like a high velocity area, it's
7 sort of small high velocity area, it's in yellow and green and
8 a little bit of orange and red.

9 THE COURT: Right.

10 THE WITNESS: It's where there's a connection, a
11 preferential connection that's described in the design report
12 to the oxbow that is in that portion of the floodplain there.
13 BY MR. PENA:

14 Q We're looking at the top center of the image?

15 A The top center of the image, yeah. There's a lighter
16 green area to the left and the right of that peninsula that
17 comes down with the darker blue.

18 Q Okay.

19 A And so those areas are now going to be higher in
20 velocity. We talked about the potential for the river general
21 to reconnect to this oxbow. And I think in fact that's what
22 you're seeing in this model where you have the debris blockage
23 of the fence, that you'll be forcing high velocities and
24 higher flows to the north there, through that oxbow channel in
25 a way that, you know, as these kinds of rivers change could

1 cause the main thread of the Rio Grande to actually reoccupy
2 that old oxbow. It's not inconceivable that would happen.

3 Those are the main differences. Again, of course I
4 haven't seen the comments from IBWC. I'd very much like to
5 see those comments. There are a number of other issues with
6 the model that I think still should be addressed. And that is
7 why these processes take a fair amount of time. These are
8 complicated tools to work with and to get them right you have
9 to spend time carefully working through all these issues.

10 I wanted to have a better sense of the way I believe that
11 the fence will function during high flows, that I think this
12 is a good initial concept of what that will look like.

13 Q And just to be clear, I know we're short on time, Doctor.
14 The two big problems relating to this specific area would be
15 increased erosion to the National Butterfly Center, because we
16 see an increase in velocity. That's one, correct?

17 A Yes. There's an increase in velocity in both meander
18 bends that I expect will increase erosion.

19 Q And the other potential problem is with a blockage of the
20 wall there's a potential of reconnecting the river on an old
21 path oxbow at the top of the Neuhaus property, which would
22 change the flow of the Rio Grande River potentially?

23 A Yes. I see with that blockage assumed in the fence that
24 you could have a preferential flow path that's now to the
25 north rather than to the south. And that also would have --

1 make significant implications for adjustments occurring
2 immediately along the National Butterfly Center.

3 MR. PENA: Thank you. Pass the witness.

4 THE COURT: All right. Anybody have any questions?

5 MR. COURTOIS: I'm sorry?

6 THE COURT: Does anybody have any questions of Mr.
7 Tompkins.

8 MR. COURTOIS: I do.

9 THE COURT: All right. You may proceed.

10 CROSS-EXAMINATION OF DR. MARK TOMPKINS

11 BY MR. COURTOIS:

12 Q Dr. Tompkins, can you hear me?

13 A Yes, I can hear you.

14 Q Okay. So your initial model, your base model, did you
15 assume any kind of obstruction on the Neuhaus property?

16 A There is the -- yes, the roughness of the natural land
17 cover that's there. And when you refer to it as "my model,"
18 it's not my model. It is the Fisher model, the base case
19 model.

20 Q Okay. But your testimony is based on some of your own
21 modeling where you've changed the variables, right?

22 A Well, I didn't change the variables. We have aligned the
23 fence appropriately along the grid cells.

24 Q Okay. And you assumed that you knew that there was brush
25 and trees and everything else out there existing before Fisher

1 started clearing this land, correct?

2 A Yes.

3 Q And you knew that those trees and brush and cane, they
4 collect debris and they obstruct; don't they?

5 A They may in a different way than a complete barrier. But
6 in my work, rivers, typically vegetation lays down more than,
7 you know, steel and concrete structure and doesn't trap the
8 debris in the same way.

9 Q So is the answer to my question, yes, it does trap
10 debris?

11 A Vegetation? Is the question --

12 Q There were trees and bushes out there, sir; is that
13 correct?

14 A There is vegetation on the floodplain, yes.

15 Q Okay. And it was on this property; true?

16 A There is vegetation on that property.

17 Q Okay. And the property was elevated -- the bank was
18 elevated from the river level; is that true?

19 A The bank was similar to banks in other parts of the
20 river. So, yes, if you consider that elevated, I guess that's
21 true.

22 Q Well how far above the river, normal static river level
23 is it; do you know?

24 A It varies along the river. Places I visited there, you
25 know, from a couple feet above the water surface elevation to

1 10 feet above the water surface elevation, and it varies in
2 that range.

3 Q Okay. Well, how about on this property? Because you're
4 talking about this property, the Neuhaus property. Do you
5 know?

6 A I do not know exactly, no.

7 Q In your model, your second model with this picture of
8 some bright yellow on it I'm seeing. That's assuming a 100
9 percent obstruction; correct?

10 A That's correct.

11 Q You know that the wall or the fence that's being proposed
12 is not 100 percent obstruction; correct?

13 A That's correct. Without debris on it, it may not be, no.

14 MR. COURTOIS: Okay. Pass the witness, Your Honor.

15 THE COURT: All right. Anybody have any questions,
16 anybody else?

17 MR. WARNER: Nothing from the United States, Your
18 Honor.

19 THE COURT: Any Redirect?

20 REDIRECT EXAMINATION OF DR. MARK TOMPKINS

21 BY MR. PENA:

22 Q Just to clarify. You're saying that it's not 100 percent
23 obstruction without debris. But with the debris, in your
24 opinion, it would be 100 percent obstruction?

25 THE COURT: That's not what he said. You can

1 clarify that.

2 MR. PENA: I believe that is what he said.

3 THE COURT: Oh, I'm sorry. The modeling he has is
4 with 100 percent obstruction.

5 MR. PENA: Correct.

6 THE COURT: Okay. Yeah, I understood that.

7 THE WITNESS: Yes, that's correct.

8 THE COURT: Yeah. Thank you for participating. We
9 are going to disconnect you and move on to some other
10 witnesses.

11 (Witness excused, 10:47 a.m.)

12 DR. TOMPKINS: Thank you for accommodating me. I
13 appreciate it.

14 THE COURT: All right. Who do we want to hear from
15 next? It's the Government's burden on this case. So if the
16 Government has a witness, I'd say the Government's witness go
17 next. But maybe you were saving them for rebuttal.

18 MR. WARNER: No, that's fine, Your Honor. I'd call
19 -- well, we call him Dr. Uni.

20 THE COURT: Sure.

21 MR. WARNER: But Padinare Unnikirishna.

22 THE COURT: You got it, all right.

23 All right. So, Doctor, I'm going to try to turn
24 this around so you can see the lawyers. The camera won't
25 rotate. The Skype software is fairly parochial, it doesn't

1 allow me to flip the camera. But this way you should be able
2 to see the lawyers now, Doctor.

3 Doctor is able to see the lawyers now.

4 So, Doctor, you were sworn in as a witness. I guess
5 we should have reminded Mr. Tompkins that as witness
6 previously having been sworn he was still under oath.

7 Dr. Uni, I'll just remind you of the same thing,
8 that you were already sworn in as a witness in the case and so
9 your testimony remains under oath.

10 And I'll just ask Mr. Warner, he may begin his
11 examination.

12 (Witness reminded of previous oath.)

13 DIRECT EXAMINATION OF DR. PADINARE UNNIKIRISHNA
14 BY MR. WARNER:

15 Q Good morning, Doctor. Dr. Uni, would you please state
16 your name for the Record, again?

17 A My name is Dr. Padinare Unnikirishna. I am the Chief of
18 the Engineering Services Division at the U.S. --

19 THE COURT: Now, were you able to say you cannot see
20 them or can you?

21 THE WITNESS: I cannot see them, Your Honor.

22 THE COURT: Do you have your video camera off?
23 Because this should -- I want to make sure I --

24 MR. WARNER: I show our video on, our audio on.

25 THE COURT: You're frozen. I don't know if you

1 paused your video.

2 So we can all see the Court has its video and audio
3 on.

4 All right. Well, we can proceed without you being
5 able to see us. We can all see you.

6 THE WITNESS: Yeah.

7 BY MR. WARNER:

8 Q Doctor, could you just state your name again for the
9 Record, so we have that?

10 A Padinare Unnikirishna.

11 MR. WARNER: Okay. Your Honor, is there any way to
12 control the volume so we could turn him up?

13 THE COURT: There we go.

14 MR. WARNER: Thank you, Your Honor.

15 BY MR. WARNER:

16 Q Okay. Doctor, on January 7th of 2020 were you-all able
17 to send technical comments to the Fisher Group regarding your
18 review of the model and the report that they had turned in?

19 A Yes.

20 Q And when you sent that to them -- I don't want to go
21 point-by-point for the Court. But could you just, in an
22 overview, explain to the Court some of the deficiencies that
23 needed to be fixed so that you could better evaluate?

24 A Yes. Let me just list them. We made a comment on the
25 modeling approach that is "Diffusion Wave" versus the Padinare

1 Unnikirishna equation, which is more detailed and accurate
2 approach. It is just a matter of choosing one option over the
3 other.

4 We found that the times steps were much -- there is a
5 factor called the Courant Number.

6 MR. WARNER: Okay. Dr. Uni, if you could hold on
7 for just a minute.

8 Your Honor, in that notebook, Your Honor the
9 notebook that the Government gave the Court, Dr. Uni is in
10 Exhibit 1-A and he's on page 2, number 5 of 1-A.

11 THE WITNESS: So there is a number called the
12 Courant Number, which is very critical for these kind of
13 modeling. And the Courant Number have to be within certain
14 range, and we found that rates have exceeded.

15 So one way to correct that breach and take the
16 results back to within the range is just the time step. And
17 so that was our comment on number 5.

18 BY MR. WARNER:

19 Q So would that require the model to have to be redone or
20 reworked?

21 A That requires maybe a change in the time step. So that
22 is not a difficult change to make.

23 Q Okay. And were there any other real big issue, changes
24 or fixes that the model needed?

25 A A couple of changes more. One is, in any kind of

1 modeling the surface has to be presented very well, that is
2 rock and coefficiencie. Those are represented by the Manning's
3 n values.

4 Q So is that number 6 on page 2 of your list?

5 A Yes. That is number 6 on page 2. We found that a common
6 value for your study has been adopted. And this number has to
7 be changed based on kind of terrain that you have. If you
8 have dense vegetation you have to use higher value, if you got
9 a smooth surface it's a different value. So that was an
10 important comment.

11 Q Okay. And --

12 A And finally --

13 Q Yes?

14 A And then finally, those are the comments in order to have
15 an efficient model run. Then in the model computer water
16 surface elevation, bringing some assurance of some confidence
17 in the water surface elevations. And the way you do that is
18 by calibrating the model.

19 So one of the things that we sent to the client was a
20 discharge and water surface elevation at Anzalduas Dam, so
21 that could be used as an aid for calibration. It says for
22 this discharge the actual measured value back in 2010, from
23 Hurricane Alex for so much, we tried to obtain other high
24 water elevations along the modeling reach, but we were not
25 able to. But we shared what values we had for the proposal.

1 Q Which was the 2010 Alex Hurricane flood waters?

2 A Yes. High water surface elevation.

3 Q So you sent those to the Fisher Group so that they could
4 use that to calibrate their model that you were asking them to
5 redo?

6 A Yes, that is correct. We sent it immediately after
7 sending the list of comments.

8 Q Okay. Then Doctor --

9 A So those are the comments of the existing condition
10 model. And for the proposed condition modeling our comment
11 was to visit the fence in a better manner into having a 40-
12 foot opening.

13 Q Okay. So if you would just let me clean this up for the
14 Court. So this is Exhibit 1A, page 3, number 2 at the top of
15 the page.

16 And so what was it about the 40 foot open spaces, Doctor,
17 that you wanted Fisher Group to work on?

18 A Typically you have the bollard fence, the bollard fence
19 and you have an opening beside it. So it is not in the
20 modeling to combine a few bollards and then a few open spaces,
21 and then apply the obstruction to the open space, and then
22 repeat that multiple times.

23 In their model we saw they had a forest base, it was 100
24 feet according to the product recall, and then there was a 50
25 foot open space beside that. They applied a obstruction of

1 30 percent. That means 70 percent is open. So they had a
2 40 foot opening there, and then they repeated the same
3 sequence the entire length of the fence project.

4 Q And what was the dimension you wanted them to use?

5 A We asked them to use a multiplier of say 8 to 10. So for
6 example let's say they used a multiplier of 10. So the open
7 space between the two bollards is actually 5 inches. So 10
8 files of 50 inches, you take 30 percent of that, that is about
9 35 inches. That will be an opening of 3 feet.

10 Q Okay. So basically you were asking them to make their
11 model more representative of what the fence would actually
12 look like?

13 A Yes.

14 Q Okay. Now, you sent all that to them. Then there were
15 some calculations that are critical to your analysis when
16 Fisher Group submits the models back to you; is that correct?

17 A Yes.

18 Q And you titled those in your report, Hydraulic Impact
19 Calculations; is that correct?

20 A Yes.

21 MR. WARNER: Okay. Your Honor, I would direct the
22 Court for purposes of this testimony to Exhibit 1-A, page 3,
23 and there's two, Number 1 and Number 2 under Hydraulic Impact
24 Calculations.

25 THE COURT: Sure. I have it in front of me.

1 BY MR. WARNER:

2 Q Doctor, let's just very quickly, we don't need to get too
3 technical. But Number 1, what was Number 1 about? Why is
4 that important for your analysis?

5 A It is important because it basically calculates the
6 difference between the proposed condition water surface
7 elevations, which is the water surface elevations for the
8 fence condition. And the existing condition water surface
9 elevations in the backlog area. So that difference is how
10 much the water surface elevation has gone up at various
11 points.

12 Q Okay. And so you asked them to prepare rasters. Just so
13 the Court can understand, what is a raster?

14 A I think of the raster as the surface image you have for
15 water surface elevations represented spatially for each
16 condition as a proposed condition as the same condition.

17 Q Okay. And so is it basically just going to be a list
18 showing different levels at different areas in the before and
19 levels in different areas in the after? Is that essentially
20 what it is going to show?

21 A Yes. But this is a (indiscernible) surface, you know, so
22 you can subtract one from the other and then you end up with
23 the surface of the differences and you can color code it and
24 you can see -- you know, you can easily see where the water
25 surface elevation's increased or there is no increase, or

1 there is a decrease.

2 Q Okay. And then what was the second calculation that you
3 asked Fisher to do?

4 A The second calculation is the percent deflection
5 calculations. And that is basically, as I said earlier, there
6 is a model flow at each cross section on the U.S. side, it's
7 the same condition. And once you put the fence in there that
8 flow is going to change by some number in the proposed
9 condition. So you want a subtraction. You want to see how
10 much percentage these changes occurred.

11 Q Okay. And --

12 A You want to see that -- to make sure that the impact is
13 not more than 5 percent. And you want it both for the Mexican
14 side and the U.S. side at each cross section.

15 Q And the Fisher model has specific cross sections in it
16 where they can do those calculations, is that correct?

17 A Yeah. Those are the cross section within the main
18 channel. We are still studying the laser submittal to see at
19 what cross locations they propose to make these deflection
20 calculations.

21 Q And then after some back and forth you-all actually
22 received the Fisher Group's comments back to your comments
23 this morning; is that correct?

24 A Yes, that's correct.

25 Q And have you had a chance to review the comments that

1 they made back to you?

2 A Yes. I've read through the comment responses.

3 MR. WARNER: Okay. And let me, just for the Court
4 sake, Your Honor, he is looking at Exhibit 10-A, which are
5 their comments back.

6 BY MR. WARNER:

7 Q Dr. Uni, does it appear that the Fisher Group is
8 cooperating and getting you the new calculations and models
9 that you requested?

10 A Yes.

11 Q Okay. And as for those hydraulic calculations, does the
12 Fisher Group indicate that they're going to get those
13 calculations to the IBWC?

14 A Yes. They submitted a certain condition model yesterday
15 and we have started running it. It is a model that runs for a
16 long time, and so we are waiting for the model now to
17 complete.

18 They also submitted the proposed condition model
19 yesterday, but then it crashed and Dr. Bora (indiscernible)
20 engineer, reached out to Fisher Industries and they sent us
21 the updated files to fix the problem.

22 And so this morning is working on it and I have to check
23 with him whether it is running well or not. I told him if it
24 is not running well to reach out to Fisher Industries as soon
25 as possible and get a version that runs well, or how to make

1 it run.

2 Q So if has crashed again this morning, you've asked Dr.
3 Bora to personally reach out to Fisher Industries and try to
4 see if he can work with them to get it to run?

5 A Yes. I asked him to do it right away.

6 Q Okay. And now, if you get the models to run and if you
7 get the calculations and the report, as Fisher has indicated
8 they're going to get to you, how quickly can you complete your
9 review and have some initial, I guess, opinion on whether the
10 treaty is breached?

11 A We worked on it over the weekend and these are models,
12 they take a long time to run. We'll go through the list of
13 comments and see that all has been satisfactorily addressed.
14 And I hope by Tuesday. Tuesday they will be sent to me.

15 Q By Tuesday you should -- is your estimate on having an
16 opinion on whether the treaty is breached or whether the
17 proposed condition complies with the treaty?

18 A Other than something we are missing that we have not
19 gotten, that is -- you know, we will work through tomorrow.
20 If we find something that's missing we will reach out
21 immediately and will request information.

22 Q Okay. And then from there you would send whatever your
23 initial opinion is on the project, you would then send that
24 over to Mexico; correct?

25 A Yes. That is the plan, yes.

1 Q But you will have at least had your initial opinion by
2 that time; correct?

3 A By that time I hope that we have an understanding of what
4 the effects are and if they are significant or not.

5 MR. WARNER: Okay. Your Honor, at this time I pass
6 the witness.

7 THE COURT: All right. Any questions?

8 MR. COURTOIS: Yes, Your Honor.

9 CROSS-EXAMINATION OF DR. PADINARE UNNIKIRISHNA
10 BY MR. COURTOIS:

11 Q Dr. Uni, am I understanding you correctly that you're not
12 looking for anything further from Fisher to make your
13 determination?

14 A We tried to -- a list of comments in such a way that we
15 wanted them to be sufficient to satisfy our understanding of
16 the elevator that's a lot, and we tried to make the comments
17 as well. So it's better to find the balance between the two.

18 Q Oh boy, I'm not sure my question's answered. But what
19 I'm trying to find out is, everything you asked for from
20 Fisher you've received now; correct?

21 A Yes.

22 Q All right. And you're not waiting for Fisher to give you
23 anything further in order to make your determination; is that
24 correct?

25 A If the proposed condition model does not run, then we

1 will you'd have to reach out and get some information to make
2 it run. But other than that we've got the information that we
3 need. We have not got the exact calculations, the twin
4 factory operations that we described. And we have also not
5 got a report. But we can always send questions and get
6 responses before we get a report.

7 Q So am I understanding you correctly that you're going to
8 get most of your information, if not all of it, from the
9 results of the 2D modeling. Is that what I'm understanding
10 from you?

11 A Yes.

12 Q Okay. So these calculations in this report or more form
13 over substance because you're relying on the 2D modeling?

14 A The calculations are to be submitted. We need the
15 calculations to know what the facts are.

16 Q And I'm trying to find out whether those calculations are
17 things that you can obtain from the 2D modeling.

18 A It is not a simple task to generate those impact
19 calculations. That is why you need a team of proponents to do
20 that and submit to us.

21 Q All right. So you're waiting for calculations in the 2D
22 model to run that you've got processing right now?

23 A Yes.

24 Q All right. And based on that, you think that you can
25 make a determination no later than Tuesday?

1 A Yes.

2 Q And you know that on other projects you've had that
3 sometimes you may go back to whoever the proponent is and say,
4 can you tweak it in this way or in that way, correct?

5 A Yes.

6 Q Okay. So you know that if they're proposing to put up a
7 bollard fence and you say, can you put in a couple of flood
8 gates, you could do that; right?

9 A Yes.

10 Q And you know that that could be done pretty much at any
11 time, right?

12 A What was that again, please?

13 Q That could be done at any time. If they started
14 construction today or tomorrow, you could come back to them
15 and say, you need to add a couple of floodgates and that could
16 be done, couldn't it?

17 A No. But then what? If you put those two flood gates
18 until that particular run is made.

19 Q Right. But I guess my point is, is that whatever they're
20 doing out there can be undone. If you determine that, no,
21 this is just totally unacceptable, it could be undone, it
22 could be pulled out of the ground; couldn't it?

23 A We are looking for impact calculations on impacts.

24 Q Yes, I understand that. You're looking for the impacts.
25 But my question is a little different to you, is that if

1 somebody, for example, planted a tree and that tree were a
2 problem, somebody could come in and take out the tree;
3 correct?

4 A The tree can be taken out but we don't know whether the
5 floodgate will return without problems. So that run has to be
6 made to ensure that the floodgate open and other impacts.

7 Q I understand. You want to run a bunch of models to
8 determine what the impact is, correct? I mean, that's what
9 you're telling us; right?

10 A What was that again, please?

11 Q I understand. You're trying to get -- you're using
12 models to determine what the impact is, correct?

13 A Yes.

14 Q Okay. And then my only question then, kind of where I'm
15 going with this is that if they're moving dirt, if dirt is
16 removed, the same dirt could be put back; correct? I mean,
17 that's just common sense, right?

18 A Yes.

19 Q All right. And if you're putting up a structure and
20 you're building a structure, the structure could be brought
21 down; couldn't it?

22 A Yes.

23 Q It could be modified, correct?

24 A It could obviously be brought down, yes.

25 Q Okay. It could be brought down, it could be modified, it

1 can be changed; correct?

2 A Yes. Any structure can be changed.

3 Q Okay. And then that includes this bollard fence,
4 correct?

5 A Yes.

6 Q You haven't seen anything about this project that
7 somebody couldn't come in and make modifications to it if that
8 was necessary; correct?

9 A Any modifications can be made to the structure. But if
10 there's a structure in place that has an impact, we want to
11 make sure that the impact doesn't --

12 Q I understand. So if you determine that there was an
13 impact and then say, we want you to modify this in some way;
14 right?

15 A If you find an impact, you want the modeling to reflect
16 that the structure as required to avoid impact.

17 Q Right. And my only point is, is that these things can be
18 modified at some later date. Would you agree with that or not
19 agree with that?

20 A You can modify anything at a later date.

21 Q Okay. Including this bollard fence, correct?

22 A Yes.

23 MR. COURTOIS: Okay. Pass the witness.

24 THE COURT: All right. Anybody else have any
25 questions? Mr. Pena?

1 MR. PENA: I have a couple, Your Honor.

2 CROSS-EXAMINATION OF DR. PADINARE UNNIKIRISHNA

3 BY MR. PENA:

4 Q Dr. Uni, this is Javier Pena. I just have a couple of
5 clarification issues. You're running these models, and wanted
6 to get this information because it's important to get accurate
7 information because what your job is, is to make sure that the
8 United States border between United States and Mexico does not
9 get changed by man-made structures, correct?

10 A Yes.

11 Q And if this Court doesn't have accurate information, this
12 Court can't make an accurate decision on whether this proposed
13 project will change the border between the United States and
14 Mexico; correct?

15 A Yes.

16 Q And did you hear Dr. Tompkins testimony?

17 A I could hear parts of it, the audio was not clear.

18 Q Do you agree that one of the issues that needs to be
19 resolved and investigated is whether or not the building of
20 this wall will cause deflection that could potentially
21 reconnect the Rio Grande River to that oxbow at the top of the
22 Neuhaus property?

23 A We are reviewing those kinds of issues.

24 Q Do you agree that that's a possibility that if there is
25 significant deflection because of an obstructed wall, that

1 that oxbow can reconnect and the path of the Rio Grande River
2 can be altered?

3 A We are looking at the full facts at this time.

4 Q But you agree that that's something that needs to be
5 looked into because it is a possibility; correct?

6 THE COURT: Don't lead the witness.

7 THE WITNESS: Yes.

8 THE COURT: He's aligned with you, so let's ask a
9 different question. Don't lead the witness.

10 BY MR. PENA:

11 Q What is your concern regarding the flow and deflection at
12 the top of the Neuhaus property?

13 A I'm sorry. Please repeat the question.

14 Q What is your concern and what are you looking into
15 regarding the change of flow and the deflection of water and
16 debris at the top of the Neuhaus property, the northern part
17 of the Neuhaus property?

18 A We are looking at each of the cross sections that I
19 mentioned earlier. We are looking at the percent deflections
20 to the U.S. and to Mexico, and we are trying to -- if we are
21 exceeding crucial limits.

22 Q And what would happen if you exceed those crucial limits?

23 A They you would reach out to the proponent and ask them to
24 make some modifications, like floodgates or whatever, to
25 mitigate those impacts.

1 Q But my question is, what would those impacts be? Why
2 would that violate the treaty? What would be the effect on
3 the treaty if that deflection is significant?

4 A That is the threshold that the Commission has adopted.

5 Q Why? What's the potential impact? What's the end result
6 potentially?

7 A It pushes those lines to one country or the other.

8 Q Okay. And that violates the treaty?

9 A Yes.

10 THE COURT: Well --

11 MR. PENA: Thank you.

12 THE COURT: -- if it exceeds the threshold it's a
13 violation. I mean, what is the threshold? I thought I read
14 something on your report that it's a 5 percent or something?

15 THE WITNESS: Your Honor, the threshold is about 5
16 percent, yes.

17 THE COURT: All right. Mr. Warner, any redirect?

18 MR. PENA: Pass the witness.

19 MR. WARNER: Yes, Your Honor. Just briefly.

20 REDIRECT EXAMINATION OF DR. PADINARE UNNIKIRISHNA

21 BY MR. WARNER:

22 Q Dr. Uni, if you don't have a chance to analyze the wall
23 and it gets built and then subsequently you determine through
24 the models that it does deflect water above the tolerance
25 level and would effect the boundary line. If that wall is

1 already there and we have a flood event before it can be
2 modified, can that be fixed then? Can the damage that that
3 causes to the river bank be fixed?

4 A I don't know the answer to that question. It could be
5 fixed but it would take, you know, time and money to fix it.

6 Q I mean, if it shifted the boundary line of the United
7 States and Mexico --

8 THE COURT: He answered your question. You may not
9 like the answer. He said, yes, it could be fixed but it would
10 cost a lot of money.

11 MR. WARNER: I pass the witness, Your Honor.

12 THE COURT: Mr. Courtois?

13 MR. COURTOIS: Thank you, Your Honor.

14 THE COURT: I meant to ask the others, does anybody
15 else have any questions? Mr. Kirby?

16 MR. KIRBY: No, Your Honor.

17 THE COURT: Mr. Vicinaiz? All right. Mr. Courtois.

18 MR. COURTOIS: Thank you, Your Honor.

19 RE-CROSS-EXAMINATION OF DR. PADINARE UNNIKIRISHNA
20 BY MR. COURTOIS:

21 Q Dr. Uni, you're familiar with the treaty that we've been
22 talking about, the treaty of 1970; correct?

23 A 1973, yes.

24 Q All right. And you're generally familiar with it,
25 correct?

1 A Yes.

2 Q All right. Have you read it before?

3 A I read the part that is relevant to this particular
4 project.

5 Q All right. I mean you keep referring to the treaty. So,
6 have you read the whole treaty?

7 A I'm not familiar with all elements of the treaty. We
8 mainly looked at Article 4 (b) (1).

9 Q Okay. So you're not aware that in the treaty there's a
10 provision that talks about if the boundary line between one
11 country and another changes by erosion or some subsequent
12 event, that there's a procedure set up where the country that
13 loses some property can actually get it back.

14 Is that something you're familiar with or not?

15 A I'm not familiar with that. There is an agency that know
16 that.

17 Q So is that a surprise to you?

18 A It's not a surprise to me that a -- (indiscernible).

19 Q So, I mean, is that something that you say, no, that's
20 not true or is that just you're not familiar with it in the
21 treaty?

22 A I've read it.

23 Q So if there's provisions there about one country getting
24 property back in the event that the boundary line changes,
25 you're just not familiar with that, correct?

1 A What is that again?

2 Q If there's a provision in the treaty that talks about a
3 procedure for one country to get property back in the event
4 that the boundary line of the river changes, you're not
5 familiar with that?

6 A I'm not familiar with that.

7 Q But all this talk about changing the boundaries and
8 everything else, then you really can't talk about that because
9 you haven't read the whole treaty; is that true?

10 A I've not read the whole treaty.

11 Q Okay. Well, you were given some questions about changing
12 the boundary line. And my only point, and I want to know if
13 this is true or not, is you're really not the person to talk
14 to about that because you just don't know what effect that
15 would be one way or another under the treaty?

16 A I know that when there are natural events that cause the
17 boundary line to shift, that the treaty provides a procedure
18 for both countries to work together to rectify the boundary
19 line.

20 Q Right. So if it shifts for some reason, whether it's
21 natural or unnatural, there's already procedures set up where
22 the country can get the property back; correct?

23 MR. WARNER: Your Honor, I'm going to object. I
24 don't think that's a fair representation of the treaty. If
25 he's going to conflate the two, natural and unnatural.

1 THE COURT: The witness has already indicated he has
2 no knowledge of this whatsoever, so these are argumentative
3 therefore, these questions.

4 All right. Everybody's has two chances. No more
5 questions for Dr. Uni.

6 But are there any other witnesses you want to call?
7 It looked like there were maybe other people there with Dr.
8 Uni.

9 MR. WARNER: Your Honor, if I could, just a moment.

10 THE COURT: Dr. Uni, that does conclude your
11 testimony but the Government may ask others.

12 (Witness excused, 11:18 a.m.)

13 MR. WARNER: Your Honor, the United States has no
14 more witnesses.

15 THE COURT: All right. So Dr. Uni, there are no
16 other witnesses, so thank you for attending. I am going to
17 disconnect you at this time.

18 DR. UNNIKIRISHNA: Thank you, Your Honor.

19 THE COURT: All right. So those are all the
20 witnesses from the plaintiffs in both parties. At the last
21 hearing there was some indication that there might be some
22 witnesses testifying on behalf of the defendants.

23 MR. COURTOIS: Yes.

24 THE COURT: You may call your first witness.

25 MR. COURTOIS: I call Thomas Fisher.

1 THE COURT: I'm sorry. What was the last name?

2 MR. COURTOIS: Fisher. Tommy Fisher.

3 THE COURT: Fisher. If you could stand there and be
4 administered the oath, if you raise your right hand.

5 (Witness sworn.)

6 THE COURT: All right. Now, if you could be seated
7 over here.

8 All right. Mr. Courtois, whenever you're ready.

9 MR. COURTOIS: Thank you.

10 DIRECT EXAMINATION OF THOMAS GENE FISHER

11 BY MR. COURTOIS:

12 Q Would you please identify yourself?

13 A Thomas Gene Fisher, President and CEO of Fisher Sand and
14 Gravel, TGR Construction.

15 Q How long has Fisher been in business?

16 A Probably incorporated almost 70 years, and my dad
17 probably another 10 or 15 years before that.

18 Q First of all I'd like to clear up something. Fisher
19 Industries, is that actually an entity?

20 A No, it's a trade name. Fisher Sand and Gravel is the
21 entity that owns everything.

22 Q And when you say "entity," is that a parent company?

23 A Yes.

24 Q All right. So when there is a reference to Fisher
25 Industries, that's not actually a legal entity?

1 A That's correct.

2 Q All right. So if we talked about Fisher you're referring
3 to Fisher Sand and Gravel in particular. But in this case is
4 there another entity that's actually doing the work?

5 A Correct. TGR Construction has the lead on this and
6 Fisher Sand and Gravel would be a sub to TGR.

7 Q All right. And so is TGR related to Fisher in some way?

8 A It is.

9 Q And how is that?

10 A It's 100 percent owned by Fisher Sand and Gravel.

11 Q So it's a subsidiary?

12 A Yes.

13 Q All right. Now, let's talk a little bit about your
14 experience. So tell me a little bit about you. Education.
15 Let's start there.

16 A All right. I grew up in the construction business from
17 shoveling sand, sweeping floor, stacking steel, to eventually
18 taking over the company at the age of 25. So this will be my
19 25th year running the company. And we took over much of the
20 sand and gravel business in the upper Midwest; North and South
21 Dakota, Montana, Wyoming, and then grew it from 30 to 40
22 million into a half a billion to 6, \$700 million a year
23 company, heavy civil construction.

24 Q All right. Can you give the Court an idea of kind of the
25 project that Fisher -- and I'm using that as kind of parent

1 company -- what kind of projects have you or your subsidiaries
2 done?

3 A We're vertically integrated so we pretty much do
4 everything. We own our own steel companies that make our own
5 equipment to crush the gravel. How Fisher started we were
6 more like the *Flintstones*, we crushed big rocks into small
7 rocks to make bas gravel, concrete, asphalt. And then as we
8 grew we got into asphalt paving, we got into concrete paving,
9 big grading projects, big pipe projects, big bridge projects,
10 levy projects.

11 So we have a lot of experience working on the rivers and
12 different places on the Mississippi, Louisiana, and different
13 things like that. So we're very well rounded. So it gave us
14 the ability to do what we're doing here and give the
15 Government a different look on how to get things done.

16 Q Do you have a college degree?

17 A Yes, I do.

18 Q What is that in?

19 A Anchor business.

20 Q Let me direct your attention to October of 2019. Do you
21 recall, there was some discussion at the last hearing about a
22 meeting with IBWC and Fisher. Do you remember that?

23 A Yes, I do.

24 Q Had Fisher or you in particular, had any experience with
25 the IBWC before that?

1 A Yes, we did. We built a project, Memorial Day through
2 the first week of June, where we put up a half mile right next
3 to their headquarters at IBWC in El Paso, Texas, straight up
4 the mountain, and we put in a half mile in 10 days.

5 Q All right. So how did you get involved with the IBWC.
6 Did you talk to them at that point?

7 A We were working through an organization called We Build
8 the Wall, and I believe We Build the Wall had the first
9 contact with the IBWC. And towards the end, when we were
10 instructed to put a gate in, then I met some of the people at
11 IBWC, including Commissioner Jean Harkins and some of her
12 staff. I think Rebecca was there, Frankie Penion (phonetic),
13 a few other people.

14 Q All right. So now let's focus back on this project. So
15 in October, I'm kind of referring you back to that meeting.
16 How did that meeting come about?

17 A Well, that meeting came about as I got to know Jane, the
18 Commissioner. I'm from Dickens, North Dakota, she grew up in
19 Beach, North Dakota, about 60 miles. So two places all the
20 way across the country, here's two North Dakotans running --
21 she's running a big organization, I'm running a large
22 construction company.

23 And so I told her that we have some new, updated designs
24 to build in the Rio Grande Valley, and I've seen that Border
25 Patrol's really struggling building boarder fence, you know,

1 one to two, maybe even three miles off the boarder, and it
2 looks like they're building more of a flood wall than really
3 border protection because they're building it on the levees.
4 And I'd like to set up a meeting. And I've got some patent
5 preparatory information that I'd like to show with you and
6 only a couple of the DHS high up DHS people have seen it. And
7 that was our new design for what we were talking here today.

8 So I sent that to her about mid September, I believe,
9 text her the picture. She kept it confidential, along with
10 the DHS, and then she wind up the meeting with her top people.
11 And the big thing was is, I want to get out in front and be
12 proactive, because on the one job at El Paso I felt like we
13 were a little reactive because we sort of put in a fence. I
14 was getting an order to put in a fence -- or not the fence,
15 but the gate, and it was part on their property, so it was a
16 little bit messy. So she agreed to meet with her people and
17 that's what we did. We came down and met with corporate
18 headquarters, and Dr. Unnikirishna was one of the main people
19 there.

20 Q Okay. That's where I was getting at. What was the
21 purpose of the meeting?

22 A The purpose of the meeting was to show them exactly what
23 we were going to build, how the design worked. I went over
24 that with Jane. She wanted me to explain to the technical
25 people. And the biggest thing was is, talking about doing

1 anything for IBWC concurrence.

2 Q Let me stop you there. Did you provide a PowerPoint
3 printout to them?

4 A Yeah. Not only did I give them PowerPoint, I also gave
5 them pictures of why we want to build there for border
6 security and different things like that.

7 MR. COURTOIS: Can I approach the lectern?

8 THE COURT: You may.

9 BY MR. COURTOIS:

10 Q Who was at this meeting in October?

11 A I remember Dr. Uni, Jean Harkins, I apologize for the
12 other names of the people. But there was another lady
13 assistant, director of something sat across from me. And then
14 a gentleman in right-of-way and one other person was there.

15 Q Well, who came for Fisher?

16 A Myself and Craig Ginch.

17 Q All right. And who is Mr. Ginch?

18 A He's our professional engineer that does a lot of the
19 design with me.

20 Q Is he employed by Fisher?

21 A He's employed by TGR.

22 Q Okay. All right. So I've got a printout. Do you
23 recognize this in any way, sir?

24 A Yes. That's one of the presentations, along with the
25 pictures I shared with IBWC and actually gave it to Jean on,

1 what do you call it, the little thumb drives.

2 Q Okay. Did you go over this with them at that meeting in
3 October?

4 A Absolutely. Almost two -- I think we were two hours or
5 something.

6 Q And just so I'm clear. When I see the first page here I
7 see the first page here I see kind of the representation of
8 what looks to me like a bollard fence.

9 A That's correct.

10 Q Is that generally what you were attempting to do on the
11 Neuhaus property?

12 A That is correct. Different style of bollard fence. No
13 anti-climb plate and spread farther.

14 Q All right. And is that still the plan to do this type of
15 bollard fence?

16 A That's exactly the plan.

17 Q I see that there's a roadway next to the bollard fence?

18 A That is correct.

19 Q And I see that there is light posts next to the Bollard
20 fence?

21 A That is correct. With technology cameras.

22 Q And is that still the plan for the Neuhaus property?

23 A That is absolutely correct.

24 Q All right. So let's go through this a little bit. You
25 explained a little bit on this next page about what the

1 bollard fence is, who Fisher is and that sort of thing;
2 correct?

3 A That is correct.

4 Q All right. Did you go over this with them when you were
5 there?

6 A Yes. I think the biggest thing is being close to the
7 river and stuff of why we come up with the design, why is it
8 better than the big Government or anything else. So a lot of
9 things was longevity, functionality, all the different things.
10 So the biggest thing was is, you can't have the border
11 security without being on the border. If you're two or three
12 miles back you don't -- that's what led me to this.

13 So now that we have to deal with the river, potential
14 floods and different things, what is the most I can open the
15 fence to accommodate future and possible floods, but still
16 provide security?

17 So the Government, when they do their bollards, their
18 bollards are separated a little bit in a diamond formation at
19 a little under 4 inches, and then the Government allows you to
20 turn square in water situations to get a 5 inch opening.

21 But the problem is, is when you turn them square you have
22 6 inches of friction through there, where ours at diamond at 5
23 inches, only have, you know, a millimeter where it crosses 5
24 inches and then it opens up. So that's why you saw --

25 Q I'm going to slow you down there. You're aware of what

1 the Boarder Protection has proposed, at least in this area by
2 the Neuhaus property in terms of a bollard fence, correct?

3 A Yeah. It's really a fencepost on top of a floodwall to
4 protect the IBWC levee.

5 Q All right. And in terms of the Neuhaus property, how far
6 away -- you're aware that the Neuhaus property is shaped like
7 a peninsula; correct?

8 That's correct.

9 Q All right. And then you've got -- how far away is it at
10 kind of the longest point between what's proposed by the
11 Boarder Protection and the actual river itself?

12 A It's over two miles.

13 Q All right. I see at the bottom here it says something
14 about flood resistant. Your system is flood resistant and
15 does not cause deflection or obstruction in the Rio Grande
16 River.

17 Is that something you discussed with them in October of
18 2019?

19 A Absolutely. We spent minutes on it. When you get to the
20 end of the presentation. But I think in this overview page I
21 just really wanted to say is that we were galvanizing the
22 bollards. So with our whole design there's no rust and no
23 dust. And so when you galvanize and do different things, and
24 we're actually on the river.

25 So on this page, this is sort of demonstrating one of the

1 RGB projects that the Corps has put through. And I said, what
2 is the effect of that by basically cutting everybody's homes
3 off on Golf Course and cutting them right in half when we can
4 build right on the river.

5 Q All right. So again, are you referring to where the
6 Border Protection is talking about putting their bollards
7 plates?

8 A Yeah. That was the place that I could find the
9 absolutely closest that the Border CBP was going to get to the
10 river.

11 Q All right. So you discussed with them the tactical
12 advantage of possibly building right on the river itself?

13 A That is correct. I mean, if you're going to protect
14 something you better be near what you're protecting.

15 Q Is your process, your system patented?

16 A It's patent-pending. I'm not sure if the patents have
17 been approved. In TGR side of the business we have several
18 patents that are working their way -- are patent-pending,
19 things that are working their way through all the time.

20 Q All right. And part of that if I'm -- what is that? Is
21 that a system using Caterpillars? Just brief. I don't want
22 you to get into all the specific details, but just general.

23 A Just in the real simple thing is the machines do pretty
24 much all the heavy lifting and the accuracy. So as you load
25 the machines the bollards are always perfectly placed. In the

1 normal construction techniques there was a lot of manual work,
2 an that's why you see a lot of the fence being a little bit
3 crooked, how sometimes the gaps are bigger, less, and all
4 that. We've perfected all that to make it perfect.

5 Q I see that you've actually gave the IBWC kind of a
6 description of that patented system; correct?

7 A Absolutely. They were ...

8 Q Okay. So it looks like you kind of went into some detail
9 about --

10 A Yeah. If you go back one page, we went into the detail
11 exactly what we're going to build.

12 Q Okay.

13 A So as you can see, the Neuhaus property is clearly
14 delineated there. And what we were basically doing is
15 comparing what we could build on the river with them, no
16 different than the RGB project that's been out for the last
17 year-and-a-half and nothing's been constructed.

18 Q So you're a competitor of some of these other contractors
19 that are doing something different, correct?

20 A Yes.

21 Q And you've talked to the IBWC about what you consider
22 environment advantages of doing it your way on this particular
23 piece of property?

24 A Absolutely. Using the galvanization it doesn't allow for
25 rust up to 125 years. So if an animal's going to go through 5

1 inch opening, like an ocelot or something, they're not going
2 to get scraped up with rust or anything.

3 The biggest thing was is being -- if there was a flood
4 event or anything, what I explained to them on that part is we
5 only have two constituents out there. We have galvanized
6 steel, which you'll see in all of your traffic, light posts,
7 or things whether you're in the northeast wherever, Because
8 it's resistant to rust, and concrete. No different if you go
9 into drinking water facilities where they're treating water.
10 You have concrete and you have a steel that's either
11 galvanized or stainless. So we looked at that to win on both
12 things.

13 Q You also talked to them about life span and maintenance.
14 And you even gained some -- I guess a brief description of how
15 it might be maintained?

16 A Yeah. We talked various, different things. Let's say
17 the Border Patrol did not want gates in some places and
18 access, they just wanted solid. With this ability we still
19 have the ability to maintain, you know, through excavators
20 going. No different than that.

21 The biggest thing was with our ability to grade and our
22 ability to control with our offers later with the Government,
23 is we can either maintain it or the Government can maintain
24 it. But we built it to win, no different than you'd build a
25 golf course or no different how the beaches are built that God

1 made, you know with the 5 to 1 so the water can come up and
2 down.

3 Q Did you explain to them at that point that you were going
4 to change the slope of the bank?

5 A Absolutely. That was the biggest point because --

6 Q All right. Let me ask you. What did you explain to them
7 that you planned to do?

8 A Yes. So when we got to the back row -- do you want me to
9 go through each thing real quick and when we get to the end?

10 Q No. I want you to answer the question.

11 A Okay. Okay. So, when we got to the last thing and we
12 talked about obstruction or deflection, right? As we were
13 talking there, if they do nothing the existing banks are
14 vertical in a lot of places. And when they're vertical,
15 because the area that we're building almost functions like a
16 lake, it's not even a river, the elevation is the same. So
17 most of the wave action comes from boats going up and down.
18 The IBWC's no different than those. So --

19 Q Tom, let me just stop you there. Really what I want to
20 know is, did you tell them, we're planning to shave the bank
21 to a 5 to 1 slope?

22 A That's what I was getting to.

23 Q Okay.

24 A Yes. Because that way one of their duties was that they
25 want to protect sediment from going in. And if you don't

1 shave the banks and plant grass it will keep undercutting, the
2 banks keep falling off.

3 Q All right. Longevity. Did you discuss that with them?

4 A Absolutely.

5 Q All right. Is that consistent with what we've just
6 talked about now?

7 A Correct. Because we have two constituents, concrete and
8 galvanized steel.

9 Q All right. So you brought up some issues about the
10 treaty in one of the last slides here. Did you have a
11 discussion with them about the treaty?

12 A Yes. We were basically, hey, we're showing you, we
13 brought in samples that we don't obstruct, we don't deflect
14 because you have these openings. We set our openings wider,
15 turn them at a diamond so they'd be more efficient. And then
16 we went through each one.

17 The other things. We made sure that we walk through,
18 that we are parallel to the floodway, not perpendicular. And
19 we're only perpendicular when you get a flood in the
20 floodplain is, I think you guys all saw in court from the
21 other models, that the velocity in the floodplane, outside of
22 the channel, is 1 to 2 feet per second, very slow.

23 Q All right. Did the IBWC -- I assume you kind of put on a
24 presentation?

25 A We went through this whole thing and then a few other

1 pictures, yes, as well.

2 Q Did they tell you anything about what you needed to do in
3 order to do this project?

4 A I specifically asked them if we needed anything. They
5 asked, you know, what we were doing, and when I told them that
6 we were going to be purchasing private land, they said if it's
7 not in our levy they don't have the jurisdiction. We're not
8 supposed to obstruct and we're not supposed to deflect. And
9 so I said, do you need anything more from us? And they said,
10 maybe just a little more clarification.

11 So that's when our engineer, Mr. Ginch, the guy made fun
12 of by everyone, basically wrote a synopsis, told them exactly
13 what our initial synopsis, what exactly the 2E model shows is
14 that the water is porose, it goes through even at 60 percent
15 blockage, 80 percent blockage, it still functions the same,
16 and it shows how the water goes back around.

17 Q All right. Let me just stop you. You're kind of going
18 on beyond where I'm asking you about.

19 A Okay.

20 Q So at that meeting in October, did they tell you that
21 they needed anything from you?

22 A Nothing specific. We said we were going to provide some
23 more information on what basically Greg wanted to provide.

24 Q Did they tell you that they wanted a 1D model at that
25 point?

1 A No, sir.

2 Q Did they tell you they needed a 2D model?

3 A No, sir.

4 Q Did they give you any samples of models and reports that
5 they had gotten on any other projects?

6 A No.

7 Q Did they tell you what their responsibilities were with
8 respect to private property?

9 A They didn't have jurisdiction in private property. And
10 the only jurisdiction they had is like when they made a
11 example, no different is if we built across their levy we had
12 to get a permit to go across their levy when we did that in El
13 Paso or whatever you want to call it, New Mexico area on the
14 west side of El Paso, Sutherland Park, and that was it.

15 MR. COURTOIS: We'd like to show some pictures from
16 this computer.

17 BY MR. COURTOIS:

18 Q Is this a picture that you recognize?

19 A It sure is.

20 Q Who took it, first?

21 A I believe I got the pictures from you. I think IBWC took
22 it. I'm out there.

23 Q Do you recognize the other property?

24 A Yep. The bollards are sitting right there, where they'd
25 be in their final position.

1 Q All right. They haven't actually been permanently put in
2 place, have they?

3 A Absolutely not. But it shows how the pattern, because we
4 respect the court order. You can't put anything in concrete.

5 Q All right. So you just set them in there to show them
6 what it would look like?

7 A That is correct. So you could see and people could see
8 what their own eyes what it's going to look like.

9 Q And I want to direct your attention to in front of the
10 bollards. Do you see this here, this section between the
11 river and bollards themselves?

12 A That is correct.

13 Q What is that?

14 A That is the 5 to 1 sloping cut, and you can see that
15 we've replanted grass, or hydroseeded that and the grass has
16 already taken hold.

17 Q Okay. What's that picture?

18 A So that's a picture of me standing at the river elevation
19 to give an understanding; that's so everyone knows the normal
20 river elevation is between 103 and 104. The base of our fence
21 doesn't start until 111. So that's where you see in the 2D
22 modeling that if water ever does come up, it inundates both
23 sides of the fence, so by the time it gets to March 28th,
24 2017 you have water on both sides as you raise into a higher
25 flood stage.

1 But the other thing it shows too, is you can see how wide
2 open the gaps are. So for someone to make a point that it's
3 going to be 100 percent blocked, it's just not factual or
4 realistic by any means. Look at how many. You'd have to
5 block 15,000 by the distance.

6 Q All right. So that's kind of the next question. What
7 was there before you started clearing and shaving the bank?

8 A So in a lot of places there was a straight vertical bank,
9 and you even heard and I agree with the other gentleman that
10 testified, anywhere from 2 feet to 10 feet. And so we cleaned
11 up a lot of the vertical banks, and this is on the very west
12 end of the project where you can see this is about 8 or 9 foot
13 vertical.

14 Q All right. And is that on the Neuhaus property?

15 A This is right at the end of the Neuhaus property where
16 the Rhodes property starts.

17 Q All right. And is that the river that comes up to it?

18 A That is correct.

19 Q And I take that there was brush and vegetation right up
20 to the bank?

21 A There was.

22 Q The Mexican side is not as high as the American side in
23 this area; correct?

24 A Yeah, the water that runs. We opened it up. We saw that
25 there was a lot of buildings built. They have some places at

1 2 feet above the water, boat ramps, houses, other places. But
2 the majority of it is about, I believe, 106 to 107.

3 Q All right. In this picture is it another picture you
4 took?

5 A Yes. This is one that I took, just so you can see how
6 the bank goes and how far off the bank we actually are.

7 Q All right. And is this a 5 to 1 slope?

8 A That is correct.

9 Q All right. And the plan would be to seed that?

10 A It's seeded now. And you can see the seed coming
11 through, it just takes time. I forgot, I think the rye grass
12 is up and the Bermuda comes in in February or March.

13 Q All right. Is there a difference between using grass on
14 a bank like this as opposed to some of the natural grasses in
15 the wild key?

16 A Yeah, a big difference. You want to pick a grass that's
17 easy to maintain and mow, so you have good vision and grip,
18 but also deep root systems. So we've worked with different
19 people on that to win on both.

20 Q Now, I've come to a video. Did you take a video out
21 there?

22 A I did. IBWC was driving to take some pictures, so I
23 videoed. I wanted to show what happens in the river when they
24 drive up and down the river.

25 Q Is this the first cell of that video?

1 A That is correct.

2 Q Let me show you this video. Can you explain what you're
3 trying to depict there?

4 A What I'm trying to do is show how calm, the river acts
5 like a lake. But basically most of the wave action comes from
6 boats, from Border patrol, IBWC, or anybody that goes up and
7 down the river. So you can see the waves coming into the
8 banks. And this is the erosion that happens every day if you
9 do nothing.

10 Q All right. So I'm seeing the waves kind of come up to a
11 bank here. How far above the river is that?

12 A I would say that bank is maybe 6 to 7 feet, and you can
13 see where it's eroded in, where it takes its natural course.
14 You can see the sediment that's pulling back into the river.
15 So the bottom line is if you do nothing, if you don't protect
16 the banks and it has cane, that's why you have moran
17 (phonetic) running through.

18 MR. PENA: Objection, Your Honor. I'm going to
19 object at this point. We're getting into opinion and I don't
20 think he's been presented as an expert or qualified as an
21 expert to testify. I've let him go for a little bit, but
22 we're getting into expert testimony at this point.

23 THE COURT: I disagree. He's just factually
24 pointing out what's in the photograph, which he describes the
25 sediment falling in.

1 MR. PENA: He's testifying as to what a result will
2 be, which is the expert testimony.

3 THE COURT: I disagree.

4 MR. PENA: Can I get a ruling on that, Your Honor?

5 THE COURT: I disagree with you. What do you need
6 more than that?

7 MR. PENA: Just objection overruled.

8 THE COURT: I disagree with you.

9 BY MR. COURTOIS:

10 Q Mr. Fisher, is this -- on the last frame of this, is this
11 on the Neuhaus property?

12 A Yes, it is.

13 Q All right. When was this taken?

14 A This was taken, I think, maybe one or two days ago. I'm
15 not for sure, exact.

16 Q And as I recall you stopped grading the bank because the
17 Court said, please don't do that anymore.

18 A Yeah. We stopped that at a certain time when that TRO
19 came out, and then we started regrading once it was lifted, I
20 believe last week.

21 Q So aside from -- I see some vegetation had been cleared
22 from that, right?

23 A Correct. We took all the invasive cane off.

24 Q All right. But aside from that, is that the natural
25 condition, aside from not having the vegetation on it?

1 A That's correct.

2 Q And I also -- the plan was for this area to be -- what
3 were you going to do with it?

4 A So basically -- well, you can see where the water did its
5 own thing and it comes in and out. So we clean that back up
6 to try to stabilize basically the bank, and then when we
7 copped the till we built a 5 to 1 going up to 111 or 112.

8 Q So based on your experience out there, what's the
9 difference when a boat comes by and there's waves, the
10 difference between it hitting a 4 or 5 foot bank versus going
11 up on your 5 to 1 slope?

12 A Yeah. You want to talk about deflection or different
13 things. If you leave everything vertical for the first 4 or 5
14 or 6 or 8 feet of the flood, you've got big problems, because
15 the water's coming up and has nowhere to go. With ours it
16 opens up and we widen the channel.

17 Q Okay. So you mean the water can just flow up on the
18 bank?

19 A Correct, as the flood comes.

20 THE COURT: That probably is outside his expertise.

21 MR. COURTOIS: Okay.

22 THE COURT: Although you do have an engineering
23 background.

24 THE WITNESS: Yeah. I've probably spent close to
25 maybe \$1 billion engineering different things and building.

1 So a lot of the patents I come up with, we have engineers to
2 verify them. But I probably have -- I don't want to seem
3 higher, but in over 25 years I've got a lot of experience on
4 what banks work, what banks don't, and in multiple places.

5 THE COURT: All right. You may proceed.

6 BY MR. COURTOIS:

7 Q Mr. Fisher, I want to direct your attention to kind of
8 where we are with the project right now. You know that
9 there's the United States and there's the Butterfly
10 Association that wants to stop your work out there.

11 A That is correct.

12 Q How would that impact your company?

13 A Well, it already has impacted our company some. I mean,
14 with the total days we've probably got 10 to \$12 million worth
15 of equipment sitting there, waiting to go. As you saw in one
16 picture the excavators are they key to hold the fence.

17 Now even more than ever with I think the Appeals Court
18 lifting the money for the Army, that they can use the funds
19 for the wall --

20 Q All right. Let me stop you there. You're referring to a
21 project that Fisher has to do some other work for the Army
22 Corps of Engineers?

23 A That's correct.

24 Q All right. And where is that?

25 A That's between Yuma and Lukeville, Arizona.

1 Q All right. And would you have to move this equipment up
2 there to do it?

3 A Yes. Some of the machines we'd move, yes.

4 Q All right. Do you have people mobilized to do this work?

5 A We do, and we have everybody ready to go.

6 Q All right. If you had to stop this work and come back at
7 some later point, how much do you think that would cost
8 you/TGR?

9 A Easily excess of 1 to \$2 million.

10 Q And why is that?

11 A Well, no difference. It's just mobilization of big
12 pieces across the country. I mean, each piece would be a 15,
13 \$20,000 bill. By the time you take time factor of money,
14 anything else that you do, it's a big deal.

15 Q Is there anything else that you want to let the Court
16 know about this project and you? I want to give you the
17 opportunity.

18 A Well, I think I was really proactive. I respect the IBWC
19 and their concerns. As a contractor and someone that puts
20 your name on something that you're representing that will last
21 100 years, I want to be here 80, 90, 100 years old, if I ever
22 get lucky to be that way, and to tell everyone that we built
23 it correctly.

24 And we only put sort of our reputation, you know, where
25 our mouth is. And there would be no way that I would ever

1 invest tens of millions of dollars out there on a project on a
2 whim that if we didn't know we were correct. So my hope is,
3 is that we've proven to IBWC, the Court, the Butterfly
4 concerns and everything, that we have the ability and the
5 financial ability to remedy any situation, if we're proven
6 wrong, I know we're not. They know they're not because I've
7 seen the 2D even though I'm not an expert in 2D I've watched
8 them run. And the second that information's in they could run
9 the same stuff.

10 So the last piece that I want people to know, that I've
11 seen and I've learned, is there's a big difference from 2D
12 versus 1D. And when the Government ran 1D they talked about
13 the high surface elevation -- and I'm just giving an example,
14 I'm not 100 percent precise. But let's just say they showed
15 on the butterfly property the water would get as high as 128.
16 Okay. And that the levee is at 133, that's 5 feet of free
17 board.

18 When we ran the 2D model, no matter how much they want to
19 change or change this little bit here, there, that's minor.
20 It doesn't change but not even a tenth in the water elevation.
21 But when they ran it without any -- if Fisher didn't exist or
22 the wall didn't exist, the 2D model shows, which is good new
23 for everyone, 123 feet or 123 feet and some change.

24 So everyone in McAllen, the Butterflies, Neuhaus, is at
25 catastrophic flood even that they have us modeling for

1 Hurricane Beulah, is actually 5, 4-1/2, 4 and 5 feet,
2 somewhere in that range, lower than they predicted off 1D.

3 And in closing, they have the LiDAR and they have the
4 ability to run 2D. So they had all this information for years
5 and years. So my thought is, is if it took us to stand up and
6 say, hey, national security's on the line here, or what I want
7 to do for this country is I just want to bring to the
8 foresight and we were open with them to do that. So they've
9 got all the information they need. We will continue to
10 provide any information, but I don't see why any reason we
11 should be stopped when we can remedy anything, and we know we
12 don't have to remedy anything because we're correct.

13 Q And what I hear from you is that if there were an issue,
14 how would you respond?

15 A Just like we responded to everything they've asked. In
16 good faith. If they asked us to move the goal posts and they
17 want us to do the 1D to 2D. We moved the goal posts and went
18 with them. If they ask us to do this to this, we've moved and
19 we went with them.

20 And the main reason is, is I respect them as an agency,
21 and if we're building 100 to 200 miles I want them
22 comfortable. But if all of a sudden Fisher's building 100,
23 200 miles, they can take it to the bank when we give them the
24 information and we're building 5 miles here, 10 miles here, 50
25 miles there, that we've done our homework right and we're

1 going to do it right and they know exactly what the finished
2 product's going to look like.

3 Q Now, if the IBWC comes back to you and says, we need you
4 to change this particular part of this wall or this fence here
5 that you're planning to put up, what's your response going to
6 be?

7 A Well first we'll verify that their information is
8 correct, and if their information is correct and it needs to
9 be redone or re-remedy to it, we will do that. Because
10 ultimately in the end, it's worth a lot more with the
11 concurrence to our company.

12 Q I heard some reference to We Build the Wall. Is Fisher
13 related to We Build the Wall at all?

14 A We are not related to them. We've worked for them on one
15 project and they donated some money to this project, a small
16 amount.

17 Q Is there any kind of agreements, anything with We Build
18 the Wall?

19 A I think that they want to, you know, look into doing
20 future projects. We'd be open to that. But our thing is, is
21 there's really no agreements. We look at it on a project-by-
22 project basis.

23 Q So as we sit here today, there's no agreement or no
24 relationship with We Build the Wall at all?

25 A I don't have any ongoing, except they can call up and if

1 they want to look at something that they want us to bid, or
2 look at, we'll look at it if they want us to build something
3 that they have.

4 MR. COURTOIS: Pass the witness, Your Honor.

5 THE COURT: All right. Mr. Warner?

6 MR. WARNER: Thank you, Your Honor.

7 CROSS-EXAMINATION OF THOMAS GENE FISHER

8 BY MR. WARNER:

9 Q All right. Good morning, Mr. Fisher. While we're
10 talking about We Build the Wall. You said that they are
11 donating a little bit of money?

12 A They have, yes, when we first started.

13 Q Okay. And how much did they donate?

14 THE COURT: Is this relevant?

15 MR. WARNER: Your Honor, I'd like to know --

16 THE COURT: I know you'd like to know, but is it
17 relevant?

18 MR. WARNER: It is based on their social media, Your
19 Honor.

20 THE COURT: Why is that relevant to whether you've
21 proven the elements of injunctive relief?

22 MR. WARNER: Because I want to make sure we have the
23 right parties enjoined, Your Honor. And they continue to say
24 they're building the wall.

25 THE COURT: Do you have any reason to believe

1 anybody besides TGR Construction is building the wall?

2 MR. WARNER: We've never seen the paperwork, Your
3 Honor. To this day we don't even know what the agreement is.

4 THE COURT: Well, it's your burden here. Isn't it?

5 MR. WARNER: Well, I'll ask the question.

6 THE COURT: Sure.

7 BY MR. WARNER:

8 Q So who is actually in charge of construction?

9 A TGR Construction.

10 Q And how much is this project costing you?

11 A We don't have the final cost, but we feel it's about a
12 \$42 million project.

13 Q \$42 million to build three-and-a-half miles of bollard
14 fence?

15 A \$42 million for three miles. It's not three-and-a-half.
16 I think that's where people are getting confused. We're not
17 building through the Rhodes land.

18 Q Does We Build the Wall have any control over how you
19 construct this wall?

20 A Absolutely zip.

21 Q Do they have any control over how you shape the bank or
22 how you put the bollards in?

23 A Absolutely nothing.

24 Q So if We Build the Wall is on social media saying that
25 they're building this wall, is that true or false?

1 A If they're saying that they're actually building the
2 wall?

3 Q Correct.

4 A Then I would say that's not correct.

5 Q All right. It's your testimony today that all they did
6 was donate money?

7 A That's what they did, yes.

8 Q But you can't say how much?

9 A I prefer not to. But I mean I think it's out there.

10 Q It's out there?

11 A I saw something that there was an article that was
12 written that it was 1.5 million.

13 Q Okay. Do you agree with that, 1.5 million?

14 A I do.

15 Q And TGR is fronting the rest of this money?

16 A Yep.

17 Q Okay. So when did you first approach Mr. Neuhaus about
18 building on his property?

19 A I think I actually talked to Mr. Rhodes first.

20 Q Do you remember when that was?

21 A Four or five months ago.

22 Q Four or five months from today?

23 A Yeah. So maybe, maybe not. Like I'm guessing. I don't
24 want to be inaccurate because I'm under oath. So it was a
25 while back.

1 Q Okay. So four months would be September, five months
2 would be August. Which one of those sounds correct?

3 A I'll guess somewhere in between there. Given those two
4 months I bet you I'm pretty close. I can go back and check
5 tickets or something when I came out there.

6 MR. KIRBY: Judge, I'm just going to object. I'm
7 not sure if this is relevant to when we were first talking to
8 landowners.

9 THE COURT: Well, maybe just a tiny -- I don't know,
10 I'll allow some of this. Try and figure out who's in charge
11 or who to be restrained.

12 MR. WARNER: Your Honor, they have accused the IBWC
13 of sandbagging them, and I'd like to know when they actually
14 knew they were going forward with this project.

15 THE COURT: All right. I mean we talked about a
16 meeting in October. I mean, that's the first IBWC knew about
17 it, so.

18 MR. WARNER: But when did he know he was going to
19 build on the Neuhaus property, is what I'm trying to get to.

20 THE COURT: All right.

21 BY MR. WARNER:

22 Q So you talked to Mr. Rhodes first?

23 A Yes.

24 Q Okay. And I'm assuming that didn't come to an agreement?

25 A No. We talked to Mr. Rhodes. We told him our idea, we

1 showed him basically the same thing and then he introduced --
2 he said that he knew Lance Neuhaus and some other people that
3 are really for it because they were very against, you know,
4 the current border wall cutting their property in half. And
5 then if you had something that could actually build and give
6 them real border security and protect their property on the
7 outside, they'd be interested.

8 Q So when did you approach Mr. Neuhaus?

9 A I believe Mr. Rhodes introduced me to our realtor, Jerry
10 Earns (phonetic), and Jerry made the first contact with Mr.
11 Neuhaus, and then I had met him after that some time.

12 Q So when did you make contact with Jerry Earns?

13 A I think right around maybe a little bit later. But
14 definitely it was before that we met with IBWC because I
15 couldn't have built the map without having all that stuff
16 first.

17 Q So before October 3rd?

18 A Oh yes.

19 Q And did you have an agreement with Mr. Neuhaus on
20 October 3rd?

21 A I'm not sure when the final agreement was or not. It
22 could have been later. But Jerry was representing us and said
23 that they would be open to it.

24 Q That Neuhaus would be open to is?

25 A Yes.

1 Q So you actually went and used a real estate agent to
2 purchase whatever interests you got from Neuhaus?

3 A Yes. I've got an agent that represents us and the owner.
4 Jerry functions as both. I think he sold a lot of the
5 farmland down here.

6 Q And so, is there a final agreement that's signed by both
7 parties today?

8 A Yes. I think we've transferred money and the only part
9 is is we have an option that gives us the right, which we're
10 going to of course exercise the option because we paid
11 everything. And the final line will be determined as the as
12 built. So as we build the entire project, then we'll as-build
13 offset from the lightpoles that go in at a certain offset.
14 And whatever that land calculates that's what the option
15 converts at.

16 Q The option that you're going to have to pay?

17 A No. I've already paid.

18 Q Okay. So how much did you have to pay Mr. Neuhaus?

19 MR. KIRBY: Judge, I'm going to object. This is
20 clearly not relevant at all.

21 MR. WARNER: Judge, Neuhaus is a party still in this
22 suit and I'm trying to determine if the damage that's been
23 caused, if it ultimately shifts the border, who are the
24 parties involved here.

25 THE COURT: Yeah, that's one. He just said it was

1 the legal relationship between them.

2 MR. KIRBY: I don't believe he has, Your Honor. We
3 don't even know what the nature of the relationship is.

4 THE COURT: He said they funded already an option to
5 purchase --

6 MR. KIRBY: Correct.

7 THE COURT: -- which they'll execute upon completion
8 of the wall so that they can determine the, I guess, needs and
9 bounds, the actual footage being acquired.

10 THE WITNESS: And that's what we transfer. So we
11 can answer the question it would be -- if there is an issue it
12 would be through Fisher. Nothing to do with Neuhaus.
13 Neuhaus, as far as I'm concerned, sold it.

14 MR. KIRBY: And Judge, we're going to be producing
15 the lease shortly.

16 THE COURT: I know they're in public records. It
17 would be found in deed records of the County, I presume?

18 MR. KIRBY: It's actually a lease, that they already
19 have --

20 THE COURT: A lease.

21 MR. KIRBY: -- full control of the property at this
22 point with an option to purchase.

23 THE COURT: All right. We'll just ask you to
24 provide that. Can you provide it today, tomorrow?

25 MR. KIRBY: We can provide it, Judge. We'd rather

1 not provide a purchase amount.

2 THE COURT: Sure. You can redact what you think is
3 not relevant or should be privileged, and then I can rule on
4 it if there's some request for that.

5 BY MR. WARNER:

6 Q Who pays for any damages that might come from the
7 construction of a wall in your agreement with Neuhaus?

8 A We do.

9 Q So you're fully liable or is it an indemnity agreement?

10 A I can't answer that. But I think in most of the jobs we
11 have insurance and we warranty our work.

12 Q But that was not signed when you met with the IBWC on
13 October 3rd?

14 A I don't remember at that point. I don't think --

15 Q Was it signed at Christmas, the agreement?

16 A I'm not even sure when the final one was. I'm not sure.

17 Q Was it signed at Thanksgiving?

18 A I'm not sure. I don't even know if I had signed it. I
19 think one of the people that work for me do that kind of
20 stuff, so I don't know.

21 Q So how could you -- if you didn't have an agreement with
22 Neuhaus, how could you sit at the IBWC and tell them exactly
23 where you were going to build if you didn't even have an
24 agreement?

25 A Because we do have an agreement. In America when you

1 look someone in the eye and you shake their hand and you say,
2 I'm going to pay this much for your land and it's done, it's
3 done. Just like in North Dakota. It works this way in Texas.
4 When you walk into someone else's land and say I'm going to
5 take your land in eminent domain it doesn't work so well.
6 That's what we have hundred -- you know, a lot of miles lined
7 up to do this.

8 Q So you did not have a signed legal agreement with Neuhaus
9 to purchase his land when you met with the IBWC on October
10 3rd?

11 A Through the realtor we had a meeting of the minds for
12 that. And I trust Lance no different than he trusts me, and
13 we went forward. Do it all the time.

14 MR. WARNER: Objection. Non-responsive, Your Honor.

15 THE WITNESS: Okay, whatever.

16 THE COURT: Well he didn't have -- and we don't need
17 your sidebar remarks. The answer is there was not a signed
18 document, it was a handshake at that point.

19 THE WITNESS: That's the way I understand it, yes.

20 BY MR. WARNER:

21 Q Okay. So you had a handshake deal with Neuhaus when you
22 met with the IBWC on October 3rd?

23 A Yes. We knew we were coming here.

24 Q Okay. But he could have pulled out at that at that
25 point, could he not? There's nothing in writing to prevent

1 Mr. Neuhaus to pulling out of that deal, was there?

2 MR. COURTOIS: Judge, I'm not sure what relevance
3 any of this has. He's already talked about he's got an
4 agreement in place, now they're going back to say, you know,
5 what rights did you have back in October when you talked to
6 us.

7 THE COURT: He's not a lawyer. I mean, maybe
8 there's some detrimental alliance, but you know, there's a
9 statute of frauds he probably doesn't even know about, that
10 the real estate has to be in writing.

11 I think you're asking questions way beyond his
12 expertise. When you got the answer of the handshake deal, at
13 some point it's converted in writing and you're not sure when
14 that was.

15 MR. WARNER: Your Honor, may I approach the Elmo?

16 THE COURT: You may.

17 BY MR. WARNER:

18 Q Mr. Neuhaus [sic], this is one of the pages that your
19 attorney put up representing that you presented this page to
20 the IBWC as part of your PowerPoint presentation; is that
21 correct?

22 A That's correct.

23 Q Okay. So would you agree with me, this page is actually
24 titled billed cost; correct?

25 A That's correct.

1 Q And is there anything on this page that tells the IBWC
2 that you're going to build specifically three-and-a-half miles
3 of fence along the river on the Neuhaus property?

4 A Not in this document, but the document sitting right next
5 to Mark as well. There was other pages we gave, so you could
6 bring that in right behind them, it's the top page. And that
7 was also given to IBWC. That's specifically when we got into
8 it, after we've done this proposal, or this presentation. We
9 went into the specific area and that document is sitting right
10 there on top of that table.

11 Q So this document that you showed, showed the Neuhaus
12 property, it showed roads, it showed even a wall on Butterfly;
13 correct?

14 A It shows where you can build by the river and what you
15 could do. There it also shows U.S. Government land that's
16 Fish and Wildlife and the park and different things like that.

17 Q Correct. This was a pitch to them about what you could
18 do, correct?

19 A Not only was it pitch to what we could do, but it was
20 specific. So if you bring in the other one we'll show exactly
21 where it is. And they have that document too, your clients
22 do.

23 Q So you had models to show exactly what was going to
24 happen on the three-and-a-half miles of the Neuhaus property
25 when you met with them on October 3rd?

1 A Yes. We showed them that picture. You'll see it. It's
2 all documented right there with the line.

3 Q And it had water velocity on it, deflection rates; did
4 they see all that?

5 A No. It had the line where we were going to build. And
6 we specifically talked -- we picked that area too because the
7 river goes north/south, south/north and west/east.

8 MR. WARNER: Your Honor, may I approach one more
9 time to the Elmo?

10 THE COURT: You may.

11 BY MR. WARNER:

12 Q One of the other pages that you showed the IBWC was this
13 page about the treaty, is that correct?

14 A That is correct.

15 Q And then this talks about how the treaty prohibits any
16 construction that may cause deflection or obstruction of the
17 normal flow of the Rio Grande River or its flood flows,
18 correct?

19 A That's correct.

20 Q So you knew that when you met with them.

21 A That is correct, that's what we talked about.

22 Q And you knew that you were going to have to show that
23 your project did not cause deflection or obstruction to the
24 normal flow or the flood flows of the Rio Grande, correct?

25 A That's what we talked about.

1 Q You knew you were going to have to show that to them,
2 right?

3 A No, sir. I brought that up from DHS. That's part of
4 their 47 points on what they got to do when they're doing. So
5 if sell to DHS, that's why we had called the meeting being
6 proactive and asked them, what else do you want. And they
7 said they stood silent by that; no 1D no 2D.

8 Q Okay. And yet you're here today telling how much you
9 respect them and you want to work with them, correct?

10 A I got a job with them right now. A \$6.9 million job that
11 we beat our competitors by 15 percent, we can build in
12 probably 5 times the amount of time. So of course I respect
13 them, they're a Government agency I work for.

14 Q And your engineers have responded to the technical
15 comments that they made on --

16 THE COURT: Last week.

17 BY MR. WARNER:

18 Q -- last week? Yes.

19 A And they'll continue to respond, you know, no different.

20 Q Okay. And it is your contention, as you sit here today,
21 that you should be allowed to build because your model shows
22 it doesn't deflect water.

23 A Correct. They have a remedy. Just like we've said over
24 and over. If we're proven -- it's like you're taking the
25 position that we're guilty until proven innocent. And in this

1 country I think you're innocent until proven guilty. In good
2 faith we went before we even started to show exactly what we
3 were going to do, supply the stuff.

4 I haven't heard one ounce from IBWC in my phone calls
5 with them that, hey, you got something that's wrong. Alls I
6 hear is, I don't know or I want more. And we know we're
7 right. And so the thing is, we'll continue. And the bottom
8 line that I've even talked to you, Paxton, one-on-one, is
9 look, if we're wrong -- if I owe them money to put up a \$40-
10 plus million project on our cash flow, or our ability to
11 borrow, I should have the money that if there was something
12 wrong and it could be as drastic as this, I could cut the
13 fence down in two days. I'm going to build it in eight.

14 Q Do you understand that that slide that you showed the
15 IBWC in your presentation says that it's their duty to
16 prohibit construction that would deflect. Do you understand
17 that that's their duty?

18 A You can say that's their duty or whatever. Then show me
19 where anywhere else. Because I've talked to a lot now after
20 this thing, I've called multiple land owners and asked them,
21 hey, when you build a berm somewhere and you do something,
22 you're definitely adding to the floodplain. Did you get a
23 permit.

24 People that have houses, you know, developers here that
25 have friends here, and it's silent. There's not one time. So

1 I believe we are being treated different and are we being
2 treated different because we're so amenable to that or should
3 we take really a different position that we don't want to, and
4 we're doing everything by the rules. And if they don't like
5 the outcome, they have the model.

6 Here's the bottom line, is anyone and any of these
7 experts, just like the expert that testified -- no different,
8 I'm becoming an expert now, but the bottom line is spent, is
9 you can run it and it doesn't lie. You can change a
10 coefficient, you can change that.

11 But I'm going to tell one more thing. That model that
12 Mr. Ginch is going to testify next, we've run it and we didn't
13 crash on an 80/20 blockage, 80 percent blocked. And when you
14 block it all the way to 80 percent it only changed the water
15 surface one-tenth at the maximum amount. So it went from
16 200ths to 1200ths, or 500ths to 1500ths. You can't even
17 measure --

18 Q Do you understand the IBWC is just simply asking you to
19 show them that and give them those calculations --

20 A We did. They have the files.

21 Q -- so they can verify it?

22 A They have the models, they have the experts. No
23 different than I believe than the Judge said, why can't you
24 run the same stuff too, you've had it. And furthermore,
25 they've had the LiDAR informatin that we had to fight, kick

1 and scream for, or this would have been done a long time ago.
2 You didn't want to provide it.

3 And we found out when we finally got the hard drive, IBWC
4 had it the whole time. You represented to the Court that --

5 THE COURT: You've answered the question.

6 Any other questions, Mr. Warner. Or next question?

7 BY MR. WARNER:

8 Q The uniqueness of your project is that infrastructure, a
9 wall or a bollard fence has not been built along the river in
10 the Rio Grande Valley; is that correct?

11 A That is correct because they don't have our abilities to
12 do it --

13 Q So you are the first --

14 THE COURT: Wait. What was your question? I'm
15 sorry.

16 BY MR. WARNER:

17 Q The uniqueness of his project is that he is the first one
18 to come and construct either bollard or a wall along the banks
19 of the Rio Grande River. Isn't that correct?

20 A That's not correct. Bollard, yes. There are some flood
21 walls and different things in cities that I've seen as we've
22 looked around, farmers that had walls for intakes on pumps,
23 pumping out of the water. There's one on Neuhaus. So there's
24 actually obstruction that looks just like a flood wall, but
25 it's maybe 6 feet, 7 feet tall, and it's probably 30 feet

1 long. So there's several places. The irrigation districts
2 had build up and down the Rio Grande Valley. I mean, it's a
3 river.

4 Q They build three-and-a-half miles of bollard fence right
5 along the river bank?

6 A Structures. You asked if they built --

7 THE COURT: Okay. Now we're getting argumentative.
8 Let's ask a question. Hang on, let's just ask a question.
9 Let's not argue with the witness.

10 BY MR. WARNER:

11 Q Is your project unique?

12 A It's fence, it's unique with our design, but it's a
13 fence.

14 Q And it's unique in its location, is it not?

15 A I don't think so. I've seen fence in a lot of places of
16 the flood area.

17 Q 18 feet of bollard fence, three-and-a-half miles long.
18 Could you tell me where else in the Rio Grande Valley you've
19 seen three-and-a-half miles of bollard fence, 18 feet high
20 along the river bank?

21 A For the first thing it's three miles, to start with, not
22 three-and-a-half. And I don't think I've seen any 18-foot
23 fence out of bollards, specifically bollards.

24 Q Yours is the first one, is it not?

25 A Yep.

1 THE COURT: What is the Government building? I
2 thought it was bollard fencing. It's 30 foot.

3 THE WITNESS: 30 foot bollard.

4 MR. WARNER: Not along the riverbank, Your Honor.

5 THE COURT: In the Roma area, isn't it along the
6 riverbank?

7 MR. WARNER: That will be the only spot now.

8 THE WITNESS: Yes.

9 MR. WARNER: But we had to run all the deflection
10 rates, Your Honor. We made that very clear with the Court.
11 We complied with the treaty.

12 THE COURT: All right. I'm just saying there are
13 other, the Government's doing it in one location. It seems to
14 be okay with the Government and then when some private citizen
15 wants to do some -- I'm having trouble with the difference --

16 MR. PENA: Your Honor, I would offer that we haven't
17 been complied --

18 THE COURT: -- in position that the Government's
19 taking in the case where it is the Plaintiff condemning
20 property and putting up a wall as opposed to here. And isn't
21 the Government going to dissect the butterflies? I mean
22 basically put a wall up, dissecting the property of the
23 National Butterfly Commission?

24 MR. PENA: Your Honor, they are excluded under the
25 appropriations bill. They're excluded from wall.

1 THE COURT: My recollection is that you indicated
2 that through different fundign there was going to be a wall
3 along the levee bank that dissects the property on the levee.

4 MR. PENA: The only information I have is that
5 they're not going to have a wall.

6 THE COURT: They're on the levee.

7 MR. PENA: They're excluded under the appropriations
8 bill.

9 THE COURT: But I thought there's a different
10 funding. It was not the appropriation's bill that's going to
11 fund the construction of a wall through this. It's going to
12 dissect all this area.

13 MR. PENA: They were excluded. I don't believe the
14 new funding bill directly --

15 THE COURT: It decent prohibit it.

16 UNIDENTIFIED FEMALE: They put further restrictions
17 on the Treasury things.

18 MR. PENA: Right. There are other restrictions that
19 I think -- it's still excluded, Your Honor.

20 THE COURT: All right. Honestly, Mr. Warner, I
21 sincerely understood that when this started a month ago,
22 whenever this case started, that you had indicated just
23 showing some aerials that there was going to be a wall
24 constructed on top of the levee through this area.

25 MR. WARNER: But we have to exclude the Butterfly

1 Center. They're excluded in the appropriations bill.

2 THE COURT: All right. Again, I've never seen the
3 appropriations bill. But I thought there was separate
4 funding, I don't know through DoD or other things that
5 permitted the actual construction of this through that area.
6 But that's what I understood from what you had said. So if
7 you didn't say that or didn't mean that, then I misunderstood.

8 MR. WARNER: I certainly didn't mean that if I said
9 that, Your Honor.

10 THE COURT: All right.

11 MR. WARNER: They are clearly excluded in the
12 appropriations bill.

13 MR. COURTOIS: Sorry to interrupt.

14 THE COURT: Well, none of really know maybe.

15 MR. COURTOIS: Well, there's a lawsuit that the
16 Butterfly Association has brought against the Government. We
17 filed an exhibit with their lawsuit about building the fence.
18 So I mean, I'm not really sure what the complaint is there.

19 MR. WARNER: Your Honor, I pass the witness.

20 THE COURT: All right. Mr. Pena, did you have any
21 questions?

22 MR. PENA: Yes.

23 THE COURT: Let's just try not to be redundant.
24 We're sort of running long here.

25 MR. PENA: Yes. And a lot of those issues I had

1 here, Your Honor, were addressed. So I will try to be as
2 quick as possible.

3 CROSS-EXAMINATION OF THOMAS GENE FISHER

4 BY MR. PENA:

5 Q Mr. Fisher, is it your testimony today that you have all
6 the permits required? Other than IBWC issue, you have all the
7 other required Governmental permits?

8 A I believe so, yes.

9 Q Okay. So do you have the 404 and Section 10 permits
10 under the River and Harbor Act? Do you have those permits?

11 A But we don't need a 404 on the river.

12 Q So it's your understanding that you only need those
13 permits if you build over the river?

14 A In the river. Or in the river in the water, yes.

15 Q Okay. So you didn't get permits to dredge and fill in
16 the riverbanks to create this 5 to 1 slope that went into the
17 water now?

18 A We never built any 5 to 1 slope in the river. We cut a
19 vertical bank back and we brought material back. So therefore
20 we took -- put the tow maybe six to eight feet out of the
21 water. In some places it could have been 20 feet out. Not in
22 the water, but behind, back on the slope.

23 Q So you don't have those permits because it's your
24 understanding those aren't required?

25 A Correct. We're not in the water.

1 Q Now you keep saying that you have the funding and you
2 have assured everyone that if damage is done that you're doing
3 everything you can to address those concerns and right those
4 wrongs.

5 How would you remedy the loss of land? And I understand
6 that you're saying that it won't result in a loss of land.
7 But in case it does, how would you address those concerns?

8 MR. COURTOIS: Judge, I need to object. Number one,
9 relevance; number two, calling for a legal conclusion.

10 MR. PENA: These are issues that were brought forth
11 by the direct testimony, Your Honor, and I'm just --

12 THE COURT: But it's still got any relevance. I
13 mean, this is a preliminary injunction hearing. This is not
14 the trial on the merits. I'm just trying to understand how
15 that would go to any of the four elements that you and the
16 Government must prove for either a temporary restraining order
17 or preliminary injunction. I mean it might be the irreparable
18 injury, their ability to pay damages if there were any. So
19 I'll allow that question.

20 MR. PENA: Thank you, Your Honor.

21 BY MR. PENA:

22 Q How would you remedy the loss of land? Let's say for
23 example the Butterfly Center does lose land because of the
24 increase of erosion. Assuming, and I understand, you don't
25 agree that that would happen. But let's assume that that does

1 happen. How would you remedy that?

2 A You could do it a couple different ways. One, you'd have
3 to start with a 404 permit from the same Corps of Engineers
4 you asked if I had one; have the ability to work in the water.
5 No different through sheet pile or different things, put a
6 coffer down in, and then basically bring the material right
7 back and build their slope right back out.

8 Q How much would that cost, or how long would that take?

9 A It would be very simple. We build coffer dams all the
10 time, all over. With their square footage, a week or two.

11 Q So you're saying that you could get the dam, the permits
12 with the IBWC, which would be required now because you're now
13 going back into the river and changing the course of the river
14 back to the original setting. Are you even sure that you
15 could get that done once the riverbank is lost and the border
16 is shifting?

17 A People build on the river all the time. How do you think
18 docks are built or anything else.

19 Q But you understand this is a separate question. I'm not
20 talking about building a small dock.

21 A No, no, no. I'm --

22 Q We're talking about putting land back that has washed and
23 become part of South Padre Island.

24 A No problem. Look at what's done in Mississippi or
25 Louisiana on the Mississippi when they do restoration

1 projects. They do restoration projects in the swamp all the
2 time.

3 Q We're not --

4 A And it's building land, it's the same thing. So let me
5 finish what I am so I can explain it to you. It's no problem.

6 Q Well, no, it's non-responsive.

7 THE COURT: Let him finish. You asked the question,
8 let him finish. I assume this is all tied in somehow.

9 Go ahead.

10 THE WITNESS: It's not an issue. It's really not an
11 issue.

12 BY MR. PENA:

13 Q Okay. So you're saying remedying loss of bank on the
14 Mississippi is the same and remedying that loss of land on the
15 Rio Grande River. Do you have the IBWC on the Mississippi?

16 A You have the Corps of Engineers on the Mississippi.

17 Q So the answer's no, you don't have the IBWC and the
18 requirements on the banks --

19 A You're talking -- you're really talking apples and
20 oranges. You're asking me first, if something washes away,
21 right, can you put it back. And the way I read 4.2 of the
22 treaty is, you have the right to protect your land and you
23 have the right to stop the river from meandering, no different
24 than they have the right to make sure you don't object or --
25 sorry -- deflect or obstruct water.

1 If you do nothing, history will show you. Look at a
2 Google map with all the oxbows. God and history will change
3 the banks. So if you don't want your banks changed, I would
4 recommend that maybe your client will contact us next and we
5 build there and fix her banks, then there wouldn't be any
6 problem, and she'd never lose one inch. And she would
7 actually enjoy the river because we could shape it to the 5 to
8 1 and she could go enjoy the river. No problem.

9 Q So it's your testimony that once the riverbank is changed
10 and the international border is shifted, you could easily just
11 go in there and in a couple of weeks, put it back, going
12 through the IBWC process, getting approval from Mexico, and
13 you can ensure that that would happen, and you'd be able to do
14 that?

15 MR. COURTOIS: I need to object. He keeps putting
16 in there the border is shifted and everything. There's
17 absolutely no evidence of that in this case.

18 MR. PENA: There absolutely is.

19 THE COURT: It's a hypothetical. We'll we're going
20 to argue about that. But I feel like we're getting redundant
21 here. Obviously the Court knows there has to be some
22 permitting and whether that's approved or not is unknown at
23 this point. There would have to be a flood, unknown at this
24 -- I mean there's so many variables here I don't know that the
25 defendant could answer without just speculating.

1 BY MR. PENA:

2 Q How much money are putting aside to address these
3 potential harms?

4 A We have -- I don't remember exactly how much umbrella
5 insurances for things in the tens of millions of dollars,
6 maybe even 100-plus. And for a company and anything that we
7 build.

8 Q So this \$100 million-plus insurance --

9 A Umbrella. Umbrella. I'm not sure exactly how all the
10 insurance works. But we have insurance and we have a lot of
11 net worth too.

12 Q Okay. Would that insurance -- let's just talk about the
13 insurance coverage. Would that insurance coverage cover
14 damage to neighboring properties?

15 A I'm not an expert in this.

16 MR. COURTOIS: Again, what is the relevance of any
17 of this?

18 MR. PENA: Irreparable harm, Your Honor. If they
19 can't cover the loss --

20 MR. COURTOIS: It's their harm, not whether we can
21 pay for it. They've got to show that there's some harm to
22 them.

23 THE COURT: Right. So I guess the idea's here is if
24 they can show harm, they also have to show irreparable. So
25 for example, if the defendant could pay in money damages and

1 compensate them for the loss of their widget, then they would
2 show damage but not irreparable, because they could be
3 compensated for their widgets.

4 And so here, that second -- he's going to say, well,
5 if I've shown loss, now I want to show it's irreparable
6 because they couldn't afford to compensate me for that loss.
7 I assume that's what you're getting at.

8 MR. PENA: Yes, Your Honor.

9 THE COURT: So, I mean he's assuming the first step
10 and we're moving on to the second step of the irreparable
11 injury.

12 MR. PENA: Exactly, Your Honor.

13 BY MR. PENA:

14 Q So to re-ask the question: Does this insurance coverage
15 that you've testified about, does it cover damage to
16 neighboring properties like the Butterfly Center?

17 A I think we have insurance that covers what we build in
18 construction. So if there was damage caused by something that
19 we did faulty in construction, I'm sure that we have insurance
20 to do that. Plus, we have our net worth to do it as well.

21 Q What is your net worth?

22 A It's in the hundreds of millions.

23 Q And that would be Fisher Sand and Gravel?

24 A Fisher Sand and Gravel, TGR, they all roll up.

25 Q Okay. And I just want to clarify the insurance issue.

1 You said that that covers your construction. So you're
2 certain it covers errors in your construction, but you're not
3 certain that it covers damage to neighbor and properties? I
4 understand --

5 A I'm not 100 percent sure. I think we've got construction
6 defect, we've got all kinds of different things. I'm not the
7 expert in insurance, but I know we've got a lot of insurance
8 and I pay a lot every year for insurance.

9 Q Okay. Are you aware of the Government's soil sample
10 studies that happened just up the river at La Pereda
11 (phonetic) site and the finding that the soil on the river
12 bank in the floodway is saturated and will not support a
13 structure being built on it?

14 A It's very lucky you hired Fisher, we're good at soil. We
15 do it ourselves. So the bottom line is, there's three soil
16 types out on the property that we have. There's sand, there's
17 sand mixed with clay and there's clay.

18 So when we graded the 5 to 1 banks we mixed it properly,
19 so two things that happen. When you're saturated you put your
20 grading down and it's saturated. Yes, it can run, it can do
21 things. That's why you dry surface soils. In other places
22 you add moisture so you can get to optimum moisture and get
23 the compaction.

24 Everything we've built is built to 95 to 100 percent --

25 MR. PENA: Objection, non-responsive.

1 THE WITNESS: No, I'm answering.

2 THE COURT: Let him answer.

3 MR. PENA: No. I'm asking if he knows about the
4 Government study.

5 THE COURT: Okay.

6 THE WITNESS: I don't know about that specific
7 study. But you asked me about their soils being different,
8 and I'm just explaining what soils we have here.

9 BY MR. PENA:

10 Q Okay. Have you conducted the soil samples to determine
11 whether or not the soil in this specific location can support
12 your structure?

13 A Absolutely. We wouldn't be building it without it.

14 Q Have you shared that with the Government or anyone else?

15 A They never asked. We've shared it with our third-party
16 inspector; that basically the third party that takes it over.
17 So if the Government buys it or whatever, has the stamp there.
18 Expertise in PE on it and we've got three different proctors
19 we're working on. And everything is met or you can't come up
20 the next lift.

21 Q When did you conduct those soil samples?

22 A I don't know. Probably before we started the job.

23 Q So some time October, November?

24 A I don't know the exact date. Before we started the job
25 is my answer.

1 Q When did you start the job?

2 A Mid November.

3 Q Now going to this meeting in October where you had what
4 you called the pitch to the IBWC. It is your belief that your
5 technology, your design is far superior than anything that the
6 Government is using at this point; correct?

7 A That's absolutely correct.

8 Q And you want the Government to use your design and your
9 process over, I guess, the competitors that the Government's
10 using right now?

11 A No, it's over their design. It has nothing to do with
12 competitors. They have their design where the bollards are
13 only spread at 3 inches and 5/16th that they've been approved
14 on the other project. Ours are spread at 5 inches, allowing
15 more water.

16 Their bollards rust and last 10 to 20 years as their
17 design life. Ours are galvanized and last 100 to 125 years of
18 design life.

19 Their footing is different. Our footing floats in the
20 soil. Their footing is a straight vertical that puts more
21 pressure. That's why they have problems in the walls they're
22 building on the levee as well.

23 Q Okay. What do you mean it floats on the soil? I don't
24 understand.

25 A We spread the footing. So a footing that holds that

1 bollards, because we don't have any anti-climb plate, we don't
2 need as much wind resistance for the hurricane force winds
3 because you don't have a sail on top of it. And the other
4 thing is, is because we're above the water we basically built
5 an 8-foot wide footing that's 1 foot thick. And in the middle
6 of the 1 foot thick it also goes down another 2 foot 2 inches.
7 So we encase our bollards into the ground 2 feet 6 inches
8 instead of 2 feet like the Government, and the whole thing
9 floats, so there's not much passive pressure.

10 So when God gives you soil that's sand mixed with clay
11 and different things and you're an expert on dirt, you design
12 footings that are appropriate for the area you're building.
13 Because like in New Orleans, you got to drive each pile before
14 you put a concrete wall up, because they got to stay on the
15 clay. No different here. That's the expertise of Fisher and
16 TGR.

17 Q So the anti-climb plate is that solid piece on top of the
18 Government's wall, correct, it's on top of the bollards?

19 A That's correct.

20 Q And you're saying that they have to design their face
21 differently because of the increase in wind?

22 A Yes. The over-topping due to the wind load. It's an
23 over-topping factor that you run on the design, yes.

24 Q So since you don't have that, how is your base different
25 than the Government?

1 A It's shallower. Instead of being 6 feet deep or 7 feet
2 deep it's 3 feet deep, and then we spread it on the top to go
3 8 feet wide instead of 2 feet wide.

4 Q And how thick is that concrete that goes 8 feet?

5 A Across the top the full 8 feet is a foot and it's all
6 monolithically poured, and then it's got a T-part of the
7 bottom that's monolithically poured as one. So it looks like
8 a T.

9 Q Okay. That T being the center where the bollards are
10 installed?

11 A Yeah, the bottom of the T.

12 Q 2 feet, 6 inches deep?

13 A Correct. And there's still another 6 to 8 inches of
14 concrete underneath with the complete rebar cage.

15 Q So when --

16 MR. PENA: Your Honor, can I approach the lectern?

17 THE COURT: Yeah. If you have something you want to
18 show, of course.

19 BY MR. PENA:

20 Q I'm going to show -- if I can find this in your
21 presentation. This is one of the photos you submitted to the
22 -- or you showed the IBWC during your pitch meeting for your
23 project, correct, for your technology, your superior
24 technology?

25 A I'm not pitching the IBWC. I showed them exactly what

1 we're going to build. Complete different.

2 Q Okay. Now, this area here is where you want to put this
3 bollard wall without that anti-climb plate; correct? Just
4 down this little section. We've gone over that.

5 A That's correct.

6 Q And we've got the National Butterfly Center here, another
7 refuge here, that's a State Park, this whole wooded area here;
8 correct?

9 A That's correct.

10 Q Okay. What's going to happen in a flood when this is
11 full of water and all the water has come this way. Where is
12 all this debris and leaves and twigs and branches; where's it
13 going to go?

14 A Well, if you follow the 2D model, the majority of it
15 stays in the channel because the channel, the regular
16 meandering of the channel runs a little bit faster than when
17 you get outside of the channel.

18 Q Because?

19 A Well, because it's deeper it carries the water. And
20 that's where the majority of it's going to go.

21 Q Where does the rest of it go? Will it impact -- when the
22 flood water is traveling west to east and it intersects your
23 wall, your fence, will there be blockage because of these
24 thousands of acres of wooded area impacting that wall?

25 A I would say minimal. I wouldn't say there wouldn't be

1 anything. There could be a branch here or there. Think of it
2 this way: Your experts showed the same thing coming down. Do
3 you see how the velocities are running faster in the river
4 channel than once you got to the side and as soon as you got
5 to the side on the bank they're at 1 or 2 feet per second.

6 Q You're talking about this right here?

7 A That's correct.

8 Q Okay. So can you say that again, now that I can
9 visualize it?

10 A Well, Greg will explain it more on his, because I don't
11 know how to make heads or tails out of what he did with his
12 models. There's nothing on it, there are just colors.

13 Q Okay.

14 A Greg will explain. That the easiest way to explain it is
15 the majority of the flow still runs a little faster where the
16 river meanders. And his document clearly shows yellow,
17 yellow, yellow.

18 Q Right.

19 A You know, and it shows some blue. But if you modeled it
20 right, that blue one, that strip is still running faster than
21 the cross current that's going. So the majority is -- and the
22 other thing is, is when we're spaced 5 inches, and you do have
23 water that's running this way with a little bit coming this
24 way, so the whole thing's just gradually going this way but
25 the channel's still running that way. If there was something

1 it would bump on the fence and keep on going right on down.
2 There's not enough pressure to even push it.

3 Q We don't see that, because what you're talking about an
4 increased flow here --

5 A Okay. Well, you'll see it. Wait until our expert
6 testifies and you'll see it, and I'll defer to him.

7 Q Okay. But what you testified is, you can see it on this
8 model. The flow is increased here because it's not going
9 across. All of these lines of flow are coming around the
10 wall. We don't have this across, correct? On this model.

11 A On this model he put a solid wall that's in for 100
12 percent. You're not even close to comparing apples to
13 oranges. I mean from --

14 Q What happens when it gets clogged with debris?

15 A 100 percent? Good luck. Good luck.

16 Q What's going to happen when 2,000 acres of leaves and
17 twigs and debris, trash, gets washed in a flood? Are you
18 guaranteeing that it's not going to get 100 percent
19 obstructed?

20 THE COURT: All right. We're arguing with the
21 witness at this point. Let's move on.

22 MR. PENA: Very well.

23 BY MR. PENA:

24 Q Okay. Back to you-all's presentation. The first page
25 after the title page, this is a system, a border security

1 system that you want -- you're presenting based on this, to
2 DHS and all Americans. This was a pitch -- and you've already
3 called it a pitch -- for your technology and you want the
4 Federal Government to use your technology. And you've already
5 got them to give you at least one contract; correct?

6 A That's completely different. It has nothing to do with
7 this. We bid on all those other jobs with the Corps of
8 Engineers and we bid to their specifications. Apples and
9 oranges again.

10 Q Okay. Let's go back to that. You understand in this
11 when you needed to bid and get approval for this, that you
12 were going to have to work and you put this in your-all's
13 presentation --

14 THE COURT: The document speaks for itself, Mr.
15 Pena. I feel like we're just treading ground. We've gone
16 over all this. We've gone over all this. I know you want to
17 argue with him about it. But Mr. Warner already went over
18 this. We've talked about this very slide.

19 BY MR. PENA:

20 Q What was your understanding of the word, coordination in
21 this?

22 A Coordination means exactly what I did. I first contacted
23 Jean, who is the top of IBWC, told her exactly what we're
24 going to do as CEO to CEO, if that's what you call whoever
25 runs the department. Then she said at the meeting to meet

1 with our experts who's Greg or Mike Shippiero or different
2 people like that that can do that and get on the same page.
3 That's all this is.

4 Q Right. But the coordination relates to a hydrology
5 study.

6 THE COURT: Now you're --

7 THE WITNESS: Oh my goodness gracious, that's not
8 true. It's just not true.

9 THE COURT: -- going to argue with him. Ask him a
10 question. He answered your question. And we've been over
11 this. We've talked about his October meeting, at least the
12 last two hearings.

13 MR. PENA: Well, I understand. But there's been a
14 lot of confusion as to what was agreed to, what was presented
15 and what was understood.

16 THE COURT: Is it --

17 MR. PENA: Fisher's position has been that they
18 didn't know they had to do a hydraulic study, they didn't have
19 to do all this.

20 THE COURT: How is that relevant, whether they
21 understood or didn't. I mean if they wrongly misunderstood
22 it's their fault. If they got a wrong impression, it's their
23 fault. If the Government wasn't clear it's the Government's
24 fault. I mean, I don't know that that matters for the merits
25 of this decision.

1 MR. PENA: Well, only in the sense that they're
2 pushing the Government to allow them to build a wall because
3 they took steps to incur costs before --

4 THE COURT: So if they wrongfully did it, it's on
5 them.

6 MR. PENA: And that's all I'm trying to get, Your
7 Honor.

8 THE COURT: Again, it's an argument.

9 BY MR. PENA:

10 Q Have you already put up light poles and anchored them in
11 concrete?

12 THE COURT: Yes, we've been through that. Next
13 question.

14 MR. PENA: I'm sorry. If that was addressed.

15 THE COURT: Then you weren't listening at the last
16 hearing. We went over that already.

17 MR. PENA: Okay.

18 BY MR. PENA:

19 Q Do you believe that Fisher or Neuhaus or any of the
20 defendants in this case have the right to take action that
21 will damage their neighbor's property?

22 THE COURT: That's not relevant. It's an
23 argumentative question.

24 MR. PENA: Your Honor, their whole stance --

25 THE COURT: He's not a lawyer.

1 MR. PENA: Their pleadings.

2 THE COURT: It's not an appropriate question. Next
3 question.

4 MR. PENA: Their pleadings specifically state that
5 they have a right to --

6 THE COURT: So what if their pleadings? Everybody's
7 hyperbole and you're pleading, you can read them. There's a
8 lot of hyperbole in pleadings, lot of claims. Whether they're
9 relevant is something I'll determine. Whether they think they
10 have the right to do this, it's immaterial on whether they in
11 fact have the right.

12 MR. PENA: Pass the witness, Your Honor.

13 THE COURT: All right. Anybody? Who else is?

14 MR. COURTOIS: Nothing from us, Your Honor.

15 MR. WARNER: Nothing further from the United States,
16 Your Honor.

17 THE COURT: So you can go sit down, Mr. Fisher, and
18 you can call your next witness.

19 Does anybody need a quick comfort break? I mean I'm
20 good to go, but I don't want to overlook --

21 MR. WARNER: The United States is fine, Your Honor.

22 THE COURT: Okay.

23 MR. PENA: We're fine, Your Honor.

24 THE COURT: Okay. Do you need a break or you want
25 to call your next witness?

1 MR. COURTOIS: We're fine. Greg Ginch.

2 THE COURT: Let's go. All right. If you raise your
3 right hand to be administered the oath.

4 (Witness sworn.)

5 THE COURT: All right. You may be seated over here.

6 DIRECT EXAMINATION OF GREG GINCH

7 BY MR. COURTOIS:

8 Q Would you please identify yourself by name?

9 A Greg Ginch. You'll have to plug me in because you had me
10 unplugged.

11 Q The computer?

12 A No, the HDMI. The HDMI in the well there. Sorry.

13 Q Mr. Ginch, how are you related to Fisher, Fisher
14 Industries?

15 A I am employed by TGR, a Fisher subsidiary.

16 Q Okay. And how long have you been employed by TGR?

17 A TGR is relatively newly formed. So I just was employed
18 for the past four years before this most recent year, by
19 Fisher Sand and Gravel.

20 Q Tell me about your educational background. Do you have a
21 degree in any kind of particular field?

22 A I've got a Bachelor of Science in Civil Engineering from
23 NAU and I've got a Highway Materials Engineering Degree from
24 Purdue University.

25 Q All right. Any subsequent education beyond that?

1 A Took some Master level classes at ASU and then I taught
2 as an adjunct faculty at NAU Engineering College for six
3 years.

4 Q Are you a licensed engineer, sir?

5 A Yes, in Arizona and Nevada.

6 Q What kind of projects do you work on, sir?

7 A Bridges, roads, some dams, those kind of things. Civil
8 works.

9 Q Before you joined Fisher, what, four, five years ago you
10 joined?

11 A Five.

12 Q Okay. What kind of work did you do? And I don't want to
13 get into detail of each one. Can you just kind of give the
14 Court an overview in one minute or so?

15 A I worked for a couple of contractors, and prior to that I
16 worked for 27 years for the State and I worked for a general
17 engineering consultant, Parsons Brinckerhoff. We built the
18 Katy Freeway in Houston. That's a quick synopsis.

19 Q How many years have you been doing issues related to
20 hydrology?

21 A On and off my whole career. My senior project when I
22 graduated from NAU was a Rio to flag flood way diversion
23 project for the City. So that was a long time ago, 1985.

24 Q Are you familiar with HEC-RAS modeling?

25 A Yes.

1 Q All right. And were you aware of it and familiar with it
2 before this particular project with Neuhaus property?

3 A Yes.

4 Q Not something that was strange to you or new to you with
5 respect to this issue?

6 A No.

7 Q I want to go back to kind of what Fisher has done with
8 respect to this project. We've heard testimony that you were
9 at the meeting in October with the IBWC; is that true?

10 A Yes.

11 Q Okay. Did you provide anything to the IBWC after that
12 meeting about what was planned by Fisher?

13 A Gave them sort of a schematic and detail of what we were
14 going to do with the bank to facilitate the flow and to
15 recognize the fact that this construction is actually in a
16 reservoir, so to speak. And so how the water would back fill
17 around from all sides on the construction, and mentioned that
18 the velocities would be relatively low because of that. The
19 higher velocities would be in the channel and we would not be
20 crossing the channel. That was mentioned in the submittal
21 from November.

22 MR. COURTOIS: Can I approach the lectern?

23 THE COURT: Yes, you may.

24 BY MR. COURTOIS:

25 Q I'm going to show you just generally some pictures of the

1 area in question. Do you see the Butterfly property
2 identified there?

3 A Yes.

4 Q And do you see the Neuhaus property identified there?

5 A Yes.

6 Q All right. And is that based on your understanding and
7 accurate representation about where those properties are
8 located?

9 A Yes.

10 Q Is the dam located anywhere in this picture?

11 A It's downstream, over to the lower right-hand corner.

12 Q All right. So it would be further down this way?

13 A A little further south too, yeah.

14 Q Is the levee, is that identified in those pictures to the
15 best of your knowledge?

16 A Well, I can see where it is because of the property line
17 that it's sitting on. I don't see the levee anywhere, but I
18 know where it's at.

19 Q All right. It's up in this area right here, isn't it?

20 A Yes.

21 Q All right. And if we look at this picture --

22 A Upside down.

23 Q There we go. -- that's an aerial map showing kind of the
24 same area, right?

25 A Yes.

1 Q All right. Do you see in that picture where the dam is?

2 A Yes.

3 Q All right. Is the dam down in this area?

4 A Yes.

5 Q All right. And I see that something is over here. What
6 is that?

7 A That's the north floodway channel.

8 Q All right. And what's the purpose of that?

9 A To take the allocated flow per the 1970 treaty so that it
10 all doesn't go down the Lower Rio Grande.

11 Q All right. And I know you've done some different
12 modeling of this area, correct?

13 A Yes.

14 Q All right. And when you say the word "reservoir," I want
15 you to explain that. What do you mean by the fact that this
16 acts as a reservoir?

17 A Well, when you have a flood event, in order to protect
18 the property downstream you retain it and then meter it out
19 through, in this case, through the dam and through the north
20 channel.

21 Q All right. So do you see the levee wall in this picture?

22 A Yes.

23 Q And is it generally over in this area?

24 A Yeah, to the right. Right there, your finger's on top of
25 it.

1 Q All right. And does that levee wall run all the way to
2 the floodway?

3 A Yes.

4 Q And I take it that when water comes into this area, it
5 hits the dam and it also hits the floodplain?

6 A Yes.

7 Q Does your modeling show where that water goes once it
8 hits that?

9 A It carries it over and then we don't model anything below
10 that. It wouldn't have any effect to model anything after it
11 drops over that.

12 Q All right. So am I getting the sides correct? That at
13 the bottom you got a floodway and a dam and on one side you've
14 got a levee?

15 A Yes. The U.S. levee is on the north side there.

16 Q Right. And are those the kind of components that
17 actually act as the reservoir on the United States side?

18 A Yes.

19 Q So kind of going back to this, what you gave. You gave a
20 schematic to the IBWC. What else have you given to the IBWC?
21 Let's start, did you give them a 1D model?

22 A Yes, afterwards.

23 Q All right. So you gave them the schematic. They came
24 back to you and they said, we want some further information?

25 A They said they wanted us to run HEC-RAS.

1 Q All right. And what was your understanding of what HEC-
2 RAS was?

3 A To have the computer model the flow instead of just have
4 a schematic, so we ran the 1D model.

5 Q And did you provide that to the IBWC?

6 A Yes.

7 Q And did the 1D model, did it show any significant or
8 material deflection based on your proposed bollard fence on
9 the Neuhaus property?

10 A No.

11 Q Did it show any significant or material rise in elevation
12 of water on the Neuhaus property?

13 A Very little. Probably not significant.

14 Q Did you then -- they came back to you and said, no, we
15 want more information; correct?

16 A Yes.

17 Q All right. And did they say give us a 2D model?

18 A Yes.

19 Q All right. And did you do that?

20 A Yes.

21 Q All right. The data that you got from that you got from
22 the IBWC, correct?

23 A Yes.

24 Q What was that LiDAR data? What is it? What year was it
25 and how was it obtained?

1 A It was dated 2011. They sent us a hard drive because it
2 wouldn't transmit or what was trying to transmit on the email
3 wasn't working, so they faxed us a hard drive and that was all
4 of the data points form the LiDAR run.

5 Q And when you do LiDAR you've actually got elevations at a
6 particular time for a particular piece of property, correct?

7 A Well, it's all on the dates of the flight. And if the
8 flights on different dates you might ahve different elevations
9 of standard water surfaces that it can't penetrate, but
10 everything else should be the same.

11 Q When you did your 2D modeling, how many points did you
12 incorporate into the 2D model that Fisher did?

13 A I don't have --

14 Q Ten points, hundreds of points, thousands of points; how
15 many?

16 A Yeah, I don't know the number. It's probably a couple of
17 million. You know, LiDAR sets, it's a whole bunch of data
18 points. It's all of the laser reflections from that flight
19 back to the collector.

20 Q So just explain that. Is there a flight that goes over
21 and it shoots laser down?

22 A It's a scanning laser. And then the benefit of LiDAR is
23 it gets good penetration of vegetation, or at least the
24 vegetation doesn't reflect back very strongly so you can
25 actually get the ground. We have a small drone that runs with

1 laser scanning as well, but the signal's not as pure so it
2 picks up trees just as solid as ground.

3 Q In the HEC-RAS modeling software, is that something
4 that's just germane to Fisher or is that something that's out
5 there in the public domain?

6 A No, it's free public domain.

7 Q All right. So the modeling that you put together, Fisher
8 put together, you use the data obtained from IBWC with
9 software that is generally available to the public?

10 A I already had it on the machine, HEC-RAS 5.017.

11 Q Sure. But it's available to anybody?

12 A Yes.

13 Q And is that something you would expect the IBWC to use?

14 MR. WARNER: Objection, Your Honor. It calls for
15 speculation.

16 THE COURT: Irrelevant really. Do you expect them
17 to use it? I guess maybe that's a --

18 MR. COURTOIS: I'll move on.

19 THE COURT: Sure.

20 BY MR. COURTOIS:

21 Q So let's talk about that. You did a 2D model. Did you
22 provide it to the IBWC?

23 A Yes.

24 Q All right. Did you again -- in the 2D model, was there a
25 version that was a existing condition?

1 A Yes. We did two submittals as requested. They wanted
2 the existing and then a proposed.

3 Q All right. And did you do that and provide that to them?

4 A Yes.

5 Q And again, based on your review of that data and what
6 you've provided to them, was there any material deflection
7 into Mexico of the water?

8 A No, nothing significant.

9 Q Was there any material elevation rise in water as a
10 result of the before and the after when this bollard fence
11 would be considered?

12 A Very localized. Right where the fence was. And we had,
13 in this latest one we were trying to see -- 100 percent
14 blockage is not reasonable, in my professional opinion. But we
15 tried to see how much blockage before we would get a
16 noticeable rise in the elevation. We wound up with 80/20, and
17 so we shared that with them.

18 Q Was that done in the first 2D modeling or the second 2D
19 modeling?

20 A No. The first was 60/40.

21 Q All right. And I've heard some discussion that the way
22 you propose that 2D model was that you had 40 feet of opening,
23 60 feet of just 100 percent blockage of that 60 feet; correct?

24 A Yes.

25 Q Why did you do that? Why did you do it that way?

1 A You mean versus smaller increments --

2 Q Yes.

3 A -- or versus the percentage?

4 Q Yes. I've heard some complaints about that's not
5 representative of your wall that goes through your fence.
6 It's supposed to be 5 inch of bollards and 5 inch of space?

7 A Right. The file would be so big you can't -- you have to
8 characterize it with hydraulic equivalent. So I won't
9 disagree that 60 foot of wall and 40 foot of gap is sort of
10 course, sort of large. So we went back, actually that evening
11 after court and worked all weekend and actually had already
12 started running with smaller segments and smaller cells.

13 Q Okay. And when you did that, is that part of what the
14 second 2D modeling is that you gave back to the IBWC?

15 A Yes. Yes, that's the only way we had it ready. Because
16 you can't just do that in one day. And we got the comments
17 Tuesday morning and sent the link right after.

18 Q So you've done a second 2D modeling, correct?

19 A Yes.

20 Q All right. We've talked about the 1D model, the first 2D
21 model and now we're on a second 2D model; correct?

22 A Yes.

23 Q What were the results of your second 2D model that took
24 into account what the Government, the IBWC asked you to assume
25 and change the variables in the model?

1 A Well, in general it showed a lot faster velocity in the
2 channel versus the older bank. The older bank across any of
3 the peninsulas was low, as we predicted even way back in the
4 schematic. And initially we've done some rough calculations
5 on if the reservoir is full what's the forward migration of
6 that water mass approaching the dam. So if you got closer to
7 the dam where it's narrower, then that velocity would be high.
8 But at the particular location at Neuhaus' property, the full
9 flood reservoir is over 2 miles wide, it's about 2-1/2 miles
10 wide, and just the average forward migration is about a foot
11 per second.

12 Q What's the importance of velocity, water velocity?

13 A Because we want to build a good project as well. We want
14 to work with IBWC. We've said that from the beginning. I
15 mean, we've always responded to them. And so they said their
16 problem was, let's make sure it's safe and doesn't clog,
17 doesn't collect water.

18 So if you've got the channel carrying the faster flow and
19 the first flush of that flow that goes through in the first
20 couple days doesn't even come up to the fence. And then if
21 you look at how the reservoir fills when you look at the model
22 operating, the water actually fills from the low end of
23 Neuhaus' property and sort of backs into the interior of that
24 peninsula, if you will, from the east. So the bollards are
25 actually surrounded by water at a very low velocity when you

1 first reach that 111/112 elevation that our road is going to
2 be built at.

3 And after that you've got water coming through the
4 bollards, it is shown in the schematic, it's shown in the 1D
5 model. And the channel, which goes parallel to the fence acts
6 -- well, almost like the rip tide as far as going along the
7 fence carrying that faster flow around, the deep flow if you
8 will, and the reservoir fills up and then it drains back out.

9 Q All right. So let's to kind of the nuts of this. Is
10 that you got a second 2D model. Did that show any material
11 deflection of the river?

12 A Nothing significant. Keep in mind it's got a higher
13 blockage. And I will interject one other thing is, we went
14 ahead -- after we've run a couple more of these, and we've run
15 various options just as IBWC can do, we liked the situation
16 with where we were proposing to get down the elevation at the
17 north floodway to 110 and we've taken that out. So this last
18 model does not have that in it either.

19 Q All right. Well, when you talked about obstruction being
20 80 percent, is that an assumption you've made for the purposes
21 of the model?

22 A Like I said before, we were playing with the numbers to
23 see how high we would have to go to even get much more
24 noticeable elevation. It's beyond what IBWC asked us to
25 assume with -- now keep in mind, this is something that we're

1 using to symbolize the bollards plus a proposed blockage.
2 They gave us a 30 percent number, and we're trying to comply
3 with all of that and make sure that we're being responsive to
4 them. So that combination is higher than that.

5 The other thing to keep in mind is whether it's a 60-foot
6 long block of wall or 20-foot long block of wall that has a
7 very bad inlet condition. It's a solid wall, so when water
8 runs into a solid wall there's a real localized buildup for a
9 few inches and then the water goes around and goes through the
10 gaps. That's intuitive. Everyone's seen that.

11 The bollards, because they're located at 45 degrees, have
12 a good inlet condition, a good K factor. So sort of like a
13 funnel sitting on its side, but not round, just square. And
14 so all of the water that comes to it has an opportunity to
15 accelerate a little bit and go through and then come back out.

16 If we didn't have that 8-foot wide concrete pad and the
17 20-foot wide road behind it, that might be a place where you
18 could have a scour. But since we're armored with the
19 concrete, we think that that will prevent any scour.

20 And so you're only talking about a velocity changing
21 approaching the wall, coming out of the channel, a foot or two
22 per second, squeezing down real quick and then as soon as it
23 comes back out, if there's not a big elevation change, you
24 haven't really obstructed anything.

25 The only thing that doesn't work -- sorry to take so long

1 -- is if you block it 100 percent. And like I said, my
2 professional opinion that's not realistic, especially with the
3 channel flowing parallel to the wall right in front of it can
4 sweep things off if a lot of debris were to accumulate.

5 And I'm not saying there wouldn't being a lot of debris.
6 In the first flush the channel's not full, the wall's not wet.

7 Q So going back to the results of your 2D model that you
8 have just completed, did you see any significant or material
9 deflection of the water?

10 A No.

11 Q Did you see any material rise in the water elevation?

12 A No.

13 Q You've been given some tolerances by the IBWC; is that
14 correct?

15 A Yes.

16 Q All right. And what are those tolerances in this area?

17 A 3 inches in urban, 6 inches in rural.

18 Q All right. And is this a rural area?

19 A Well, when I fly out at night there's a lot of lights, so
20 I'm guessing it's changing.

21 Q Okay. But at --

22 A We try with the more restrictive one. But they also made
23 the statement that where there's levees they don't want to
24 lose freeboard, and we understand that. We don't want to put
25 anyone at risk. We want to comply with what they need. And

1 because we've discovered it with more detail, it's actually
2 lower than they ever thought it was. We're not trying to spin
3 anyone's freeboard for free, no pun intended. But that
4 there's some room to accommodate this construction without
5 ever impinging on or putting anyone at risk in that regard.

6 Q All right. We've heard some testimony that freeboard is
7 the distance between the top of the water and the top of the
8 levee. Is that just kind of a basic understanding of that?

9 A Yes.

10 Q All right. And you were talking about a difference of
11 the freeboard. And I want you to explain that little bit.
12 Before you started this project was there some assumption by
13 the IBWC about what their freeboard was from the top of the
14 existing levee to the top of the water under the most
15 stringent hurricane conditions?

16 A Well, the guideline is to maintain 3 feet or better, and
17 they had earlier reports that said they were deficient in some
18 areas.

19 Q And your modeling in both your models showed that that
20 wasn't true, right, in this property?

21 A A little more capacity than they thought they might have,
22 yes.

23 Q And what did both of your models show with respect to
24 what the actual freeboard is, between the top of the water
25 when the biggest flood possible and the top of the levee?

1 A Depending on which part of the levee you're standing on,
2 I'd say anywhere from 5 to almost 8 feet.

3 Q So it was at least 2 feet more than what they had
4 suspected and potentially 5 feet, depending on where you are?

5 A That's correct.

6 Q All right. Have you provided some pictures from your
7 report, from your 2D modeling? Do you have some pictures that
8 you want to talk about?

9 A Yeah. That's just PowerPoint, it's not the live model.

10 Q I understand. But where did they come from?

11 A From the output from the HEC-RAS 2D model.

12 Q So how did you get these pictures? You ran the model and
13 then you did a screenshot is essentially what you did?

14 A Yes.

15 (Pause.)

16 Q All right. Mr. Ginch, what is the first slide we're
17 seeing here?

18 A I labeled them all at the top. So existing condition.
19 We were stationed Mile 172.45 and the time stamp is actually a
20 date referencing the hydrograph from the -- the design
21 hydrograph called for Hurricane Beulah. So this is the peak
22 flow, this is down near the eastern end of Neuhaus' property.
23 It's zoomed in a little bit. Sorry, you don't have the whole
24 reference but I wanted to see some detail.

25 Q All right. When you say "existing condition," that's the

1 model based on the current condition of the property?

2 A Yes, sir. The first model that we were asked to -- the
3 first 2D model.

4 Q I'm seeing a purple color that kind of coats the river on
5 both sides of the bank; right?

6 A That's the high ground of the levee itself, actually.
7 Well, the red, I guess.

8 Q Well, do you see the meandering of the river there?

9 A Yes, yes.

10 Q All right. And when you say high flow, they asked you to
11 assume a flow capacity of Hurricane Beulah, right?

12 A Beulah, yes.

13 Q Right. And when you do that at the maximum flow, this is
14 what it looks like?

15 A Yes.

16 Q All right. So that's existing, as it is today?

17 A Yes, with no bollard wall, yes.

18 Q Do you want to do one with the proposed fence in there?

19 A Yes. It's on the next slide. So now it just says
20 "proposed condition," same time, date stamp, same river
21 station.

22 Q All right. And is this from the second 2D model?

23 A Yes. This is from the most recent one.

24 Q All right. And what's the difference? I don't see any
25 real difference. What's the difference?

1 A Not much. I didn't memorize every number, but I think
2 it's a couple hundreds.

3 Q Okay. So at maximum flow, assuming the things that the
4 IBWC wanted you to assume in the second 2D model, you're not
5 getting any significant change in the flow; correct?

6 A No.

7 Q Let's go to the next one. All right. What does this
8 show?

9 A This is zoomed in a little bit closer and this is the
10 point of the peninsula, the south end of Lance Neuhaus'
11 property. And so where the elevation tag is, is actually on
12 the Mexico side of the river. And you see high ground on the
13 Mexico side very close to that.

14 Q Is this the same thing, the pink part?

15 A Water surface elevation, yes.

16 Q All right. And what's the next slide?

17 A So same location proposed condition. The color band is
18 faded a little bit but the elevation is about the same.
19 Elevation is I think 1200ths higher, if I'm not mistaken, so
20 that's about an inch-and-a-half.

21 Q All right. At peak flow?

22 A Yes.

23 Q All right. Let's go to the next one. All right. Where
24 is this?

25 A This is sort of directly north from the last one we

1 looked at. So it's centered on Lance Neuhaus' property, but
2 this is over by the west edge of it, 122.91, right there.

3 Q All right. I see that the top part of that picture
4 there's purple then it gets into green after that. Is that
5 where the levee wall is?

6 A Well, the darkest color is the levee itself. The green
7 and yellows are -- they're not water surface elevations,
8 that's the terrain behind it, there's no water out there. And
9 then the little green tag that sort of runs down and touches
10 it, that piece of levee didn't use to be there. So that green
11 is the Old Mission Channel. That used to be the outlet for
12 this reservoir before.

13 Q But basically the water that's rising peak flow, it gets
14 stopped by the levee, is what your model shows?

15 A Yes. It doesn't go outside the levee.

16 Q And that's the existing condition?

17 A Yes.

18 Q All right. Let's go to the next one. And I see it's
19 less, actually, less purple?

20 A Well, it's the shade. I apologize. I got spoiled by
21 having two screens on my desk and doing it on my laptop the
22 shading's a little different. So I'm switching between
23 existing and proposed are two different models. And so it's
24 just the shading.

25 The elevation is actually higher by I think a tenth. If

1 you go up there just for a second. Yeah, 9/1200ths again,
2 inch-and-a-half.

3 Q All right. Under both conditions it looks like the
4 Butterfly property's going to flood.

5 A Only the part that's inside the floodway.

6 Q Correct, right. The part that's closest to the river.
7 It's going to flood, preexisting and then with the proposed --

8 A It's in the reservoir. They have the same situation
9 where they have slow moving water moving through the trees and
10 stuff there.

11 Q All right. Have you got any other calculations to
12 review?

13 A I think if you go a couple more spots there's a
14 comparison of all these numbers we just went over. That's
15 another spot that's just around the corner.

16 Q All right.

17 A And so here's the same number in the center two columns
18 that we just looked at on all of those.

19 Q All right. So explain to the Court what this is, please.

20 A Well, there's the river stations on the left that we did
21 this at. And I was careful to always make sure they were at
22 the same time stamps for the existing condition and the
23 proposed condition. And then just compare -- I mean, I didn't
24 do another column to subtract the two, but they're close. And
25 then on the -- go ahead.

1 Q So the river station "MI," that's a mileage indication?

2 A Miles, yes. Sorry.

3 Q All right. And that's actually kind of giving you a
4 point in the river itself, correct?

5 A Yes. Following the main thread of the river. Every
6 river has stationing.

7 Q And I guess the elevation existing is as it is currently?

8 A Yes.

9 Q And elevation proposed is as it is with the bollard fence
10 in place?

11 A Yes.

12 Q And is this the second 2D model?

13 A Yes.

14 Q All right. And the differences between those numbers are
15 what the difference in elevation is without the fence and with
16 the fence?

17 A Yes. And it's only an inch or two at the most.

18 Q All right. The right column, is that the report you were
19 referencing earlier about the different elevations that the
20 IBWC had previously?

21 A There was -- yes. And I think this is what they were
22 basing some of their levee freeboard statements on. I can't
23 say for sure, but this is what they sent us to say, here's a
24 2008 report that shows the cross sections we used. You know,
25 just for reference.

1 Q All right. So have all of the models that you've done,
2 the 1D model, the 2D model that was done initially, the second
3 2D model, have they all been consistent in the result about
4 whether this impacts deflection or water elevation?

5 A With regard to impact, yes. The difference being the 1D
6 model started with their given elevation by the dam, so it did
7 not catch the fact that there's probably more freeboard than
8 they thought, than we all thought.

9 Q And that was only picked up when you started really
10 putting the LiDAR data into the 2D model?

11 A Yes, sir.

12 Q Has anybody from the IBWC explained to you or told you
13 that there's any kind of deflection or problem with water
14 elevation? Have they expressed any objection today?

15 A No. They just want us to make sure it's proven so that
16 everything's covered.

17 MR. COURTOIS: All right. Judge, I'm almost done.
18 I have a report. We have the 2D reports, the 1D reports, so
19 forth. I can offer them to the Court if the Court would like.
20 I don't necessarily need to change them.

21 THE COURT: Will I understand them? I mean, you're
22 welcome to offer them, it might be just sort of gibberish to
23 me. I mean his explanation is more helpful than the actual
24 reports.

25 MR. WARNER: Your Honor, the United States would

1 argue that they're simply just not relevant for our case.
2 They may be for Butterfly. I don't know. But for our case
3 we're --

4 MR. COURTOIS: Let me just go over some parts of it
5 and maybe that will clear this up.

6 THE COURT: All right.

7 MR. COURTOIS: Can I approach the lectern?

8 THE COURT: Yeah, you may.

9 BY MR. COURTOIS:

10 Q Mr. Ginch, looking at your first 2D model report. If I
11 wanted to do a comparison would I be looking at the
12 Appendix C1 and C2 or (d) (1) and D2?

13 A Yes. C1 and C2 each have eight panels in them and
14 they're coordinated and time stamped the same to match, so you
15 can step through them. IBWC asked that I put them on the same
16 page. So in the new report I'm just going to change Appendix
17 C to have errors that match. But, yeah, you're doing it the
18 right way.

19 So there's eight of them. So then C1 matches C9, C2 that
20 matches C10.

21 Q So I'm looking at pages from your 2D model report that
22 you provided to the IBWC, correct?

23 A Correct.

24 Q All right. And Appendix C, is that water elevation? Do
25 you know?

1 A Yes. Yeah. I mean what we're showing here is as the
2 hydrograph arrives in the reservoir, as more and more flow
3 starts building in the channel, how does it fill, where does
4 it break out at the banks first. And so you look at the blue
5 area, in this case to see where does it first come over the
6 bank.

7 Q Right. And I understand that. So if you're looking at
8 pre and post, you're looking at C1 is pre and C2 is post;
9 correct, with the bollard fence?

10 A Yes. Right up at the top where it says, existing
11 condition, on C1 and final condition on C2.

12 Q All right. And so, do you see much change in that first
13 picture?

14 A No, no.

15 Q How about the second picture?

16 A As I recall they all look pretty similar.

17 Q So this pre shows water starting to back up into these
18 areas. Do you see where I'm talking about?

19 A Yes.

20 Q And that's current existing condition, correct?

21 A Yes.

22 Q All right. And this is with the proposed fence. It
23 still does that, but even to a lesser extent, right?

24 A Well, if you want to know a point --

25 THE COURT: Well, can you put those back up where he

1 was talking about them?

2 MR. COURTOIS: Sorry.

3 THE WITNESS: If you wanted to note the point of
4 interest. So look where the fence would be hidden.

5 Judge, can I stand up for a second?

6 THE COURT: Yeah. Can I give you a pointer? Maybe
7 that would be more helpful.

8 THE WITNESS: Thank you. Okay. So see there's
9 water coming out right here, and if we model the fence right
10 there then not as much water can come out. There are some
11 pipes that are under the road, so there's places that leak, if
12 you will, but that's the only difference.

13 BY MR. COURTOIS:

14 Q So in essence your pictures are kind of -- I see at the
15 very first part it says, T=0 days 0 hours. And then down on
16 the second picture is 0 days 10 hours. So you're taking a
17 snapshot of the flow of water from the hurricane as it comes
18 in. Would that be true?

19 A Yes, sir. And it's a little small to see, but that's
20 also included on all these snapshots. The date is right
21 there.

22 Q All right.

23 A And you're going to find a typo here in a minute, so.

24 Q Now we're looking at 14 h ours?

25 A Yes.

1 Q When you look at these pictures from the 2D model you see
2 the same kind of flooding between pre and the post; would that
3 be accurate?

4 A Yes. The biggest difference is my scale's not the same,
5 left and right. I zoomed it out a little bit more on the left
6 side.

7 THE COURT: So let me ask a question about my
8 understanding or misunderstanding. But the IBWC's asking you
9 to do a model where the dam, the Falcon Dam releases water at
10 a certain rate, right?

11 THE WITNESS: I'm sorry, Judge. Anzalduas Dam.

12 THE COURT: And Anzalduas is downstream from this?

13 THE WITNESS: It's right there, sir.

14 THE COURT: Okay, right. But to fill up, water's
15 got to come from upstream.

16 THE WITNESS: It does, Your Honor. But it comes
17 down the channel --

18 THE COURT: Right.

19 THE WITNESS: -- and then backflows. Just like so
20 you're filling your bathtub.

21 THE COURT: Okay. So this -- again, I'm just seeing
22 a lot of images of flow rates that show flow coming downstream
23 from Falcon Dam. My understanding is how this area fills up
24 with water is that the IBWC said, we're going to release so
25 many cubic feet per second because we need to relieve the

1 stress on Falcon Lake, and they open the gates and water
2 starts filling in this area.

3 So it runs down the river until it hits Anzalduas
4 Dam and then starts to backflow?

5 THE WITNESS: It backs up in this reservoir area,
6 Your Honor. And you're absolutely right. But there's also
7 tributaries that come in between Falcon and here, and then
8 there's also a huge reservoir in Mexico that has a tributary.

9 So IBWC has a lot of eggs in the basket, and they
10 have to manage not only when they release it, but the time
11 stage when it gets to the next spot. So it's a challenge for
12 anybody.

13 THE COURT: And then there's -- again, so I'm trying
14 to understand all this flow modeling. Now you're telling me
15 there's very little flow coming down the river from water
16 released at Falcon. The water inundation occurs here that
17 actually floods the land is from backup at Anzalduas.

18 THE WITNESS: Your Honor, it's coming downriver from
19 Falcon and other places.

20 THE COURT: Right. But it pretty much stays within
21 the banks of the existing river.

22 THE WITNESS: Only initially. We're only at 10
23 hours -- or I'm sorry, we're at 14 hours. And so as it builds
24 up, and it takes a couple days --

25 THE COURT: As it builds up though, okay.

1 THE WITNESS: Yes, sir.

2 THE COURT: So as it builds up, then because of the
3 flooding being outside the banks, then the water, as it comes
4 down from Falcon, then is higher than the normal banks of the
5 river.

6 THE WITNESS: You got it.

7 THE COURT: Okay. And so what some of this modeling
8 is measuring, I guess the flow of the water at 10 feet above
9 the normal height of the river, 20 feet above the normal
10 height of the river?

11 THE WITNESS: Yes. I mean this is very -- this is
12 preliminary. We've got a few more pages to go, but this is
13 the time steps of how it fills up, and that's what we were
14 trying to explain, even with the schematic back in October.
15 I'm sorry, it was given to them in November and our meeting
16 back in October is that it's not unique, but it's a little
17 unusual that this is in the reservoir itself, so it's going to
18 get water from all sides. Which means you don't have a huge
19 surge of flow at a high velocity. When it's full there's a
20 lot of volume. But like I said, we did a preliminary
21 calculation of what the lake's going to move when it's full,
22 and you can move a lot of cubic feet per second at a very slow
23 velocity and it makes it to the bollards just fine, no
24 deflection, no scallop.

25 THE COURT: All right. And so does this modeling

1 assume zero release from Anzalduas or a certain cubic feet
2 being released through Anzalduas? I mean, how does it factor
3 in the fact that there is dam that can be opened at Anzalduas,
4 or closed, into your analysis?

5 THE WITNESS: Yes. So we have to comply with the
6 allocations of flood flows in the 1970 treaty. And so that
7 north floodway is designated to take 105,000 CFS at its
8 maximum, and that's to protect people that are on the
9 mainstream of the Rio Grande that are already built up to the
10 river.

11 And then the remainder of that hydrograph, that we
12 imported to the reservoir, goes down there. And there's
13 another dam further downstream, about 18 river miles at
14 Retamal, and that takes the Mexico allocation out to the
15 south. Both of those diversions never go back to the main
16 channel of the Rio Grande, they go to the ocean.

17 THE COURT: Okay. So on your schematic it shows
18 where the -- I'm going to call it the north diversion into the
19 floodway. All right. So, this is the U.S. floodway that we
20 all see. You can drive across it in your Mercedes, and if
21 you're a frequent cyclist this is the main turnaround point
22 for most cyclists, Anzalduas Park. And you can see that
23 there's no dam here, it's just sort of a level, it's just --

24 THE WITNESS: It's a weir. It's a fixed elevation
25 concrete wall.

1 THE COURT: Right. And water goes over. It just
2 goes over it. So is this model showing water that hasn't yet
3 gone over it or you've artificially saying it stops here, even
4 though it keeps doing?

5 THE WITNESS: Look at the bottom. And the next page
6 will show.

7 THE COURT: Okay.

8 MR. COURTOIS: So this is 14 hours on the top, and
9 then as more water comes down then it starts capping that
10 floodway.

11 THE COURT: Okay. I'm just trying to get an
12 understanding of this.

13 THE WITNESS: It take a couple days to fill up.

14 THE COURT: To get to -- what's it called, a weir?

15 THE WITNESS: Yes?

16 THE COURT: A weir.

17 THE WITNESS: Your Mercedes that you're driving
18 across that concrete road, that's a fixed elevation. If you
19 look on the grass on the north side there's the marker so they
20 can gauge the elevation. But if we can proceed another page
21 or two you'll see the rest of the story.

22 MR. COURTOIS: Judge, are you done with these?

23 THE COURT: Yeah, I'm done with those. I'm just
24 trying to understand this.

25 BY MR. COURTOIS:

1 Q All right. So it looks like on the top side we're at 23
2 hours now. And again, this is the existing condition and this
3 would be the proposed condition?

4 A Yes.

5 Q All right. And are they comparable to you? I mean, they
6 look identical.

7 A Yeah. Not precisely probably, but yes, very very close.

8 Q And the Judge was asking about the floodway. Do you see
9 the floodway starting to cap in that after 23 hours?

10 A Yeah. I think it was actually at the bottom of the last
11 slide, 20 hours. But, yes.

12 Q And do you see the dam? Where is the dam located in that
13 picture?

14 A Right there, right there. And it's off the bottom of the
15 thing there.

16 Q And the dam that you're talking about, the water can
17 actually get up over the dam, right?

18 A Yes. If the gates stay down. We were not given the
19 operating characteristics of a dam. I talked to their
20 security and one of these days I'll get a tour over there and
21 we'll get to see all that. But as Your Honor noted, the weir
22 is uncontrolled. You have no way to control it. If the
23 water's up it's going over. The dam has gates for control and
24 the normal operation appears to be that they let the water out
25 the bottom of the gates. It helps keep the intake relatively

1 clean. But if something happened and the gates couldn't come
2 up, loss of power or something jammed, something breaks, water
3 can go over the gate rather than put the dam at risk. That's
4 the way it should be designed.

5 Q So let's look at these bottom picture, which is one day,
6 15 hours. First of all the question is, when you see this
7 right here where you've got the edge of the blue and then
8 you've got green after that, is that just an indication that
9 the model didn't run that far?

10 A Yes. And you've got my first report, so the model didn't
11 go by that station and we felt like that -- we should probably
12 go a little bit above that. Initially we were told to say a
13 half mile above the dam, but to run a 2D model you really need
14 those structures in there to help the computer figure out how
15 to control and pass the water. So we actually did, on the
16 models that are already submitted, extend that back up another
17 -- I think it's 6500 feet upstream.

18 Q And the 2D model that you did, the second 2D model, is it
19 consistent with these results?

20 A Yes.

21 Q Let's look at the last couple of slides. Now we're
22 talking about 58 hours.

23 A Yeah. And I need to admit, Tommy's actually the one that
24 caught this after I sent it, so that should be 2 days 10
25 hours, that's 48 plus 10, it's 2 days not 4. So it's starting

1 to get a little late at night when I was doing some of this
2 stuff.

3 Q Right, I understand. Again, is this just a graphical
4 presentation of what the numbers are showing you based on
5 running the report?

6 A Yes.

7 Q And then the last one was done, I guess, is this at the
8 ultimate peak level?

9 A Yeah. It's actually past the peak and it's starting to
10 drop.

11 Q And again, is that consistent with proposed -- or
12 existing versus proposed, and is it essentially the same?

13 A Well, now I have to add some more explanation. Because
14 the file was getting larger and larger and we were having
15 trouble transmitting it and it was taking a while to run it.
16 So we did not run a whole week past the peak on this most
17 recent submittal. But this is a week after and we weren't
18 finding anything new.

19 What's important is the peak and what's important to most
20 people is, you know, what's the highest the water can get and
21 what's the most freeboard that you will have at that peak
22 flow, so we didn't go that far on the second one.

23 Q And I take it, just kind of based on your testimony,
24 you've been kind of living the engineering reports for the
25 last two weeks on this, haven't you?

1 A I've been working on a couple other little things, but
2 IBWC is TGR's top priority until this gets done, yes.

3 Q And based on all the modeling that you've done, have you
4 seen any material impact on deflection?

5 A No.

6 Q Have you seen any material impact on water elevation?

7 A No.

8 Q All of those within the tolerances that you were provided
9 by the IBWC?

10 A Yes.

11 MR. COURTOIS: Thank you. Pass the witness.

12 THE COURT: All right.

13 MR. WARNER: Good afternoon, Mr. Ginch.

14 THE COURT: Thank you, Mr. Warner.

15 CROSS-EXAMINATION OF GREG GINCH

16 BY MR. WARNER:

17 Q So we -- you talked to the Court about these stills, but
18 within these logs they're actually moving models with grids
19 and points that you can actually pull out specifically and
20 learn specific information about a specific point within
21 there; correct?

22 A Yes.

23 Q And then you also have cross sections along the river
24 channel itself that you yourself have designated that would
25 have their own measurements and calculations that you can do;

1 correct?

2 A Yes.

3 Q Okay. So my understanding today as we sit here, is the
4 before, or as it is model has run, but the model with the
5 project in it is still not running. And so would you find --
6 via email -- how else can we get that model from you-all so
7 that IBWC can run it?

8 A I can put it on a hard drive and drive to El Paso
9 tomorrow morning, if you want.

10 Q Okay.

11 A It's not that long a drive. But what we did last night
12 at midnight is that we found that one or two of the supporting
13 files -- and it creates several files in the directory that we
14 started in, and when you export it it doesn't always -- you
15 have to look at the dates that the file's actually -- you have
16 to export them all.

17 We missed a couple, and so when I discussed it with --
18 when Dr. Bora emailed us last night, me and Mike got right on
19 it. And what we did to keep the file size down is we did not
20 send the results output, which is the largest file, because
21 it's storing all of that data from calculations of every
22 second and a half to five seconds and output every ten
23 minutes. And made sure that all of the other supporting files
24 and the geoTIF file and base files were in there.

25 So he got it back. He said they started running it this

1 morning. It's news to me that it's still not working, but
2 that's okay, we'll fix it. We will do everything --

3 Q Mike that you mentioned is Mike Shippiero?

4 A Yes, sir.

5 Q Okay. And he's another engineer working with you?

6 A He's our engineer and surveyor.

7 Q Okay. And so you all are committed, as I understand it,
8 to working with Dr. Bora --

9 A Yes.

10 Q -- and Uni in getting this model to them; correct?

11 A they can call me anytime.

12 Q Okay. And then this morning I believe you were actually
13 the one who emailed the response to the technical comments,
14 which was that document that listed all the comments that they
15 wanted addressed; correct?

16 A Yes, sir. Yes, sir.

17 Q And in your response this morning you went comment by
18 comment --

19 A Yes.

20 Q -- as we looked out a little bit with Dr. Uni in
21 Government Exhibit 10A, and you basically either answered the
22 question or told the IBWC that you would get that information
23 to them; correct?

24 A Yes. And that's fairly typical in responding to those
25 reviews, yes.

1 Q So were you able to hear what Dr. Uni testified to
2 regarding hydraulic impact calculations?

3 A Yes.

4 Q How quickly can you get the calculations that would be in
5 the rasters and then the deflection calculations? How quickly
6 can you get those to the IBWC?

7 A We already started on it. That's why Mike's not here
8 with us. We're sort of trying to cover both ends of that so
9 he can get started on it. But I discussed it at length with
10 him at least half a dozen times yesterday.

11 One of the issues -- can we put the map back up there
12 again?

13 Q Which map?

14 A Even the one that's sitting there, doesn't matter. On
15 the lectern?

16 MR. WARNER: Sure. May I approach, Your Honor?

17 THE COURT: You may.

18 THE WITNESS: I'm better with pictures than words.

19 So this is the one with the 100 percent blockage, so
20 we're not in agreement with that per se. But let's say we
21 draw a cross section right here, Mr. Warner. And so if you
22 want to do the hydraulic calculation the way they've outlined
23 it, it's really tough on a meandering river to get all of them
24 in there.

25 So if you cut a cross section of 1000 feet -- and we have

1 that in the report actually, then it's the over bank. So if
2 you follow the pointer here. So it cuts across the 1D part,
3 the channel flow, and then it needs to go perpendicular to
4 what the expected flow is, and so it would go up to the levee
5 where it stops.

6 You get a bunch of those in there and these hinge points
7 and then these parallel overbank cross sections start to
8 become sort of crowded and meaningless.

9 We've gone through it a couple times already, Mike has,
10 and we discuss every time he runs through it. And if -- what
11 I was going to do after court today is see if IBWC would be
12 okay with 3,000 foot spacing, because the gives us about 5
13 cross sections across here, and then a couple of these long
14 branches on the overbank, and it will make a lot more sense.

15 But suffice it to say that there's -- a meandering river,
16 especially when it's filling, not necessarily when it's
17 completely full in the reservoir, and again that's what a
18 little unusual about this, you by nature have the deflection,
19 the winding, if you will, even in the pre-existing condition.
20 If you want to calculate overbank by saying the diving line is
21 the U.S./Mexico boundary, and if any water crosses it from
22 left to right or right to left, that's deflection. And you
23 have to have deflection when water comes in and then water
24 goes out the other side. And that's the entire genesis of how
25 we design this fence.

1 As long as we can get some water through it, because we
2 knew the velocity of the main reservoir when it was full it
3 was such a low velocity that it could migrate through. And
4 migration's probably the best word for it.

5 So that it can accept flow onto the land. Even the land
6 filled up before the flood peaked from behind the bollards.
7 Then the water can flow through. The main channel still has
8 its current and you're going to have that submerged deep
9 channel current during the event. So then it all drains back
10 down.

11 Q So it's fair to say, though, that it is certainly a
12 complicated and complex model?

13 A Yes.

14 Q Okay. Do you think you-all will be able to get the
15 calculations to the International Boundary and Water
16 Commission by the end of tomorrow, or are you thinking more
17 next week?

18 A Mike told me last night after the panic about the thing
19 not running at all, that T thinks he's got it. So we're going
20 to be working tomorrow of course, and maybe half the weekend.
21 Who knows.

22 Q And did you hear Dr. Uni's testimony that if he gets all
23 that from you and we get this as-built condition model to
24 work, that he can get some sort of an opinion out by Tuesday?

25 A Yes. Yes, sir.

1 Q So do you think you'll be able to get him the
2 calculations he needs?

3 A We will do everything we can to get it to him tomorrow.
4 And we may get it tonight.

5 MR. WARNER: We pass the witness, Your Honor,

6 THE COURT: All right. Anybody else have any
7 questions?

8 MR. PENA: Yes, Your Honor.

9 THE COURT: All right. Mr. Pena.

10 CROSS-EXAMINATION OF GREG GINCH

11 BY MR. PENA:

12 Q These models you presented, the first one, the purple
13 ones, the purple overlay representing the water --

14 A Yes, sir.

15 Q -- and then the step, the C1 versus C2 and C10. All that
16 is dealing with changes in elevation of the water, correct?

17 A The top water surface elevation, yes.

18 Q Okay. And those specific images that you show don't deal
19 with velocity, they deal with the elevation?

20 A Correct.

21 Q And you have presented anything to the Court regarding --
22 or to controvert the allegation of our expert, Mr. Tompkins,
23 that there is a change in the velocity?

24 A No, that's not true. Appendix D is all dedicated to the
25 velocity.

1 Q Right. But we haven't talked about that and we haven't
2 entered that. So today for this hearing, there's nothing to
3 controvert that; correct? At least not yet.

4 A I don't understand what you're asking me to do.

5 Q You haven't presented or testified about any specific
6 pieces of the documentation, modeling, or images that
7 controvert the allegations of our expert, Dr. Tompkins, that
8 there is a change in velocity; correct?

9 A There's a local change in velocity through the bollards,
10 and as the water squeezes through --

11 MR. PENA: Objection, non-responsive.

12 THE WITNESS: I'm trying to explain.

13 THE COURT: I know. That's the second question,
14 though. He's just asking you yes or no for now. He hasn't
15 asked you to explain.

16 MR. PENA: Thank you, Your Honor.

17 BY MR. PENA:

18 Q Up to now you haven't presented that evidence; yes or no?

19 A No.

20 Q Now it's important to consider the change in velocity
21 because the change in velocity can actually change the erosion
22 and diposition of sediment along the river, correct?

23 A Yes.

24 Q And it could also change the course of the river; as it
25 rose it changes where the river is on the latitude/longitude

1 lines, and it could also change the meandering path of the
2 river by taking other paths; correct?

3 A If it's not mitigated, yes.

4 Q And it's important to address those concerns; would you
5 agree with that?

6 A Yes, we agree.

7 Q Okay. Now, on the images that you were testifying to
8 about, you know, the C1 versus C10 or C2 versus C10. The
9 change in the first like 10 to 15 hours of those images, you
10 showed that there was a change in the way it would backfill
11 onto the Neuhaus property, that water that's coming up and
12 going over the riverbanks, there was actually a change in
13 those first few images. I think it was 15 hours into the
14 flooding event that there was less protrusion of the river
15 into the Neuhaus property. Do you remember those images?

16 A Yes. There was a point that we -- there was a low spot
17 from an old side channel where the water would flood in to
18 that point. And then it was met by the water coming from the
19 east, so really not net effect.

20 Q How does the bollard wall reduce the flooding or the
21 migration of the water from the river bank, the channel, into
22 the Neuhaus property if you're saying that the bollard wall
23 has no impact on deflection?

24 A You want to run that by me one more time?

25 Q Yeah. If a bollard wall offers protection to Neuhaus

1 property by reducing at least the fill rate of the water going
2 over the river channel into Neuhaus property by slowing it
3 down, how can you say that the bollard wall won't impact the
4 flow of flood water when your own testimony shows -- proves
5 that it does?

6 A I think you need to see it as it runs through the
7 program. So it enters that low area but it doesn't start a
8 major flow across the property. Like I said, it's met by the
9 backflow coming from the east. The whole property fills up.

10 Q No, and I understand that. That the conditions change as
11 the flood progresses. But at least in that initial point it
12 does slow the water down from filling into the Neuhaus
13 property; correct?

14 A It's a side volume compared the total volume of the
15 reservoir.

16 Q Right.

17 A It just fills it, it doesn't really go anywhere.

18 Q At a lower rate with the wall there than without the wall
19 there. That's what your images that you testified to show,
20 correct?

21 A We fill that area in. We're making the bank more stable,
22 more protectable, trying to protect the border, trying to
23 protect the integrity of where the river bank stays.

24 Q Right. And I'm not disagreeing with your intent on the
25 project and what you want and hope to accomplish. But just

1 the facts are, it does slow the migration of the water at some
2 point

3 A It fills a small lateral space right there.

4 THE COURT: For how many hours is this this way; I
5 mean, three hours maybe there's a slight difference in flow?

6 THE WITNESS: Yes, Your Honor. It's not near the
7 peak and it's not raising the final, and it really no net
8 effect.

9 THE COURT: All right.

10 BY MR. PENA:

11 Q And Falcon Dam releases the water at 60,000 cubic feet
12 per second at high flood events; correct?

13 A I'd have to look. I don't know right offhand.

14 Q And is the capacity for Anzalduas, is the capacity of
15 Anzalduas is to release water is lower than Falcon Dam. You
16 at least know that, correct, by about 10,000 cubic feet per
17 second?

18 A The treaty I think is 130,000 CFS. That's about double
19 what you stated for Falcon. But I'd have to look at Falcon to
20 tell you a good comparison.

21 Q But my question is, during Alex did Falcon Dam -- the
22 capacities for the two dams are different, correct?

23 A Probably. It depends on the operating plan for the dam.
24 Alex is not the maximum event. I'm just trying to understand
25 your question.

1 Q Well, the question is -- because there has been, at least
2 in my mind, some confusion on when there's a backflow and the
3 flow of the water during a flooding even though it's filling
4 up there's still flow, it's still draining out and so we still
5 have a flow across the land, once whatever is flooded.

6 A Yes.

7 Q There's still a draining effect and there is a migration
8 of the water across the land that's flooded; correct?

9 A Yes. Generally slower than the front of the hydrograph.
10 But yes, you're right.

11 MR. PENA: All right. Pass the witness.

12 THE COURT: Do you have anything else you want to
13 clarify with him?

14 MR. COURTOIS: Yes, sure.

15 THE COURT: Sure.

16 MR. COURTOIS: Just like five minutes.

17 THE COURT: Yeah.

18 MR. COURTOIS: May I approach?

19 THE COURT: You may.

20 REDIRECT EXAMINATION OF GREG GINCH

21 BY MR. COURTOIS:

22 Q You were asked about flow velocities. You analyzed flow
23 velocities in your first 2D model report, correct?

24 A Yes.

25 Q All right. And that was shown in Appendix D1 and D2. D1

1 being pre and D3 being proposed; correct?

2 A Yes.

3 Q All right. And this is the same kind of analysis that
4 you did on the elevations that we looked at in Appendix C1 and
5 C2 of your report that you provided to IBWC?

6 A Yes. This one doesn't start right at zero hours, it
7 starts at 6 hours. But again, I was very careful to always
8 have the times for pre and post match.

9 Q The purpose of doing this is really to kind of get a
10 comparison, is that --

11 A Yes.

12 Q All right. Is that what the pre and post look like at 6
13 h ours?

14 A Yes.

15 Q And what about 11 hours, is that pre and post there on
16 the screen?

17 A Yes.

18 Q And again, does that look almost identical?

19 A If I may?

20 Q Sure.

21 A So to help all of our understanding of this. So if you
22 look on the left one there. So here's that little hole that's
23 filling up but the water has no place to go. It happens in a
24 lot of these. So the dark blue is totally stagnant. That's a
25 velocity of zero or just basically it's filling. If anything

1 it's got a vertical velocity of about maybe an inch an hour
2 filling up. So the computer's representing that as lateral
3 overflow, which is the same thing that we did in the
4 schematic. Sorry.

5 Q No problem. Do you see where the Butterfly property is
6 on both of those figures?

7 A Yes.

8 Q All right. And do you see that there's blue outside of
9 the river on their property?

10 A Yes.

11 Q And it looks almost identical on both pictures, correct?

12 A It does.

13 Q Now we're looking at --

14 A There you go.

15 Q Now we're looking at 16 hours?

16 A Yes.

17 Q And you're essentially seeing the same kind of movement,
18 right, on pre and post?

19 A Yes.

20 Q Now we're 1 day, 3 hours at the top. Do you see any
21 difference?

22 A Now that the reservoir has started to spread pretty much
23 bank to bank or levee to levee. You start to see some of the
24 higher flows in the deep channel. The channel is now going to
25 be on the order of 40 feet deep, so sort of a rip current as I

1 described previously.

2 Q So am I understanding you that even though the reservoir
3 is filling up, which is reflected on the bottom picture where
4 you see the blue kind of over the whole area, you still see
5 the river in yellow portions; correct?

6 A Yes.

7 Q And would the yellow represent higher velocity?

8 A Yes. And in fact the blue, the lighter blue that you
9 noticed in the bottom is the tipping point where the reservoir
10 starts to migrate forward. It's completely full around the
11 bollards now, and so the flow starts to -- the dam's starting
12 to draw down.

13 And if you look at the dam and you look at the north
14 still way areas right here, so the water is taking -- that's
15 taking the water as fast as it can. So the dam is the control
16 for both. But when the reservoir is full, when it's bank to
17 bank, then it starts migrating forward and it gets into this
18 approach. You see higher velocity on the over bank as well,
19 because all of this is trying to squeeze down and get out
20 either under the gates there or over the weir there.

21 Q Once the water's outside the river itself, I mean the
22 velocity, it slows down; doesn't it?

23 A It does. That's why the color is blue and not yellow or
24 red.

25 Q All right. Do you use these pictures to compare, you

1 know, hey, what's my effect of as it is versus what I want to
2 do?

3 A Yes.

4 Q And now we're looking flow of velocity pictures for three
5 days. Again, are those pictures almost identical on both
6 sides of the --

7 A Very, yes.

8 Q Is that consistent with your opinion about the fact that
9 this bollard proposed fence is not going to have any material
10 effect on either elevation or velocity of the Rio Grande?

11 A That's correct.

12 Q Is this bollard fence going to have any effect on the
13 Butterfly property?

14 A I don't believe so.

15 MR. COURTOIS: Pass the witness.

16 MR. WARNER: Nothing more from the United States,
17 Your Honor.

18 THE COURT: Anything else?

19 MR. PENA: Yes, Your Honor.

20 RECROSS-EXAMINATION OF GREG GINCH

21 BY MR. PENA:

22 Q The model, the images you were just testifying to, were
23 the images from the first 2D model; correct?

24 A Yes, sir, that's correct.

25 Q Because you don't have result of the second one after

1 submitting to IBWC, correct?

2 A We do. It was running, it's just something happened with
3 their run and we will get that fixed for them just as soon as
4 possible.

5 Q Right. But the point is that what you're showing the
6 Court that there's no impact, is from the first 2D model that
7 wasn't calibrated, didn't have sediment, had 100 foot grid and
8 the wall was not aligned to that grid, correct? And that's
9 what you're having this whole --

10 A No.

11 Q -- comment section --

12 THE COURT: Okay. You can ask a question, but
13 you've got to wait for the answer before you go on to your
14 next question.

15 BY MR. PENA:

16 Q The first 2D model didn't have the sediment, wasn't
17 calibrated, it was 100 food grid and the wall model --

18 A There's not a whole lot else to calibrate to. We've
19 looked at the output from the second one and it's got a
20 similar comparison.

21 Q But we don't have that today, correct?

22 A Not yet, no.

23 Q Because the model crashed. I just want to make it clear
24 that the images we were seeing are --

25 A Yes.

1 Q -- from a modeling that isn't acceptable to IBWC and
2 you've acknowledged you need to make changes.

3 A We're making changes requested, yes.

4 MR. PENA: Thank you. Pass the witness.

5 THE COURT: All right. That concludes your --

6 MR. COURTOIS: Can I clarify very quick?

7 THE COURT: Two times each.

8 FURTHER REDIRECT EXAMINATION OF GREG GINCH

9 BY MR. COURTOIS:

10 Q It's not your model report that crashed, right?

11 THE COURT: No. We understand that, he's mentioned
12 that.

13 MR. COURTOIS: Okay. Thank you.

14 THE COURT: His is working, he needs to get it out
15 for them, there were some files that were jumbled or
16 something.

17 All right. Thank you for your time. You may take a
18 seat, you're done.

19 (Witness excused, 1:45 p.m.)

20 THE COURT: Thank you for returning that.

21 All right. Any other witnesses?

22 MR. COURTOIS: Not from Fisher.

23 THE COURT: All right. Any rebuttal witnesses, I
24 guess?

25 MR. WARNER: None from the United States, Your

1 Honor.

2 MR. KIRBY: No, Your Honor.

3 THE COURT: All right. So the Court's prepared to
4 rule if that's what you-all would like. It sounds like maybe
5 there is some room for negotiation, but if not, the impediment
6 to that, if you-all want to talk one last time, otherwise the
7 Court's ready to rule and make our decision.

8 (No response.)

9 THE COURT: All right.

10 MR. WARNER: We're ready for a ruling, Your Honor.

11 (Excerpt concluded, 1:46 p.m.)

12 (A portion of this hearing from 1:46 p.m. to 1:54 p.m.
13 was previously transcribed and not included herein.)

14 (Hearing concluded at 1:54 p.m.)

15 * * * * *

16 *I certify that the foregoing is a correct transcript*
17 *to the best of my ability produced from the electronic sound*
18 *recording of the proceedings in the above-entitled matter.*

19 /S./ MARY D. HENRY

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